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ART. I.—*On the Medical Qualities of the Asclepias Syriaca:* an Inaugural Dissertation, submitted to the Trustees and Medical Faculty of the University of Louisville. By GEOREE W. ALLEN, M. D., of Mississippi.

My attention was called to this medicine by my preceptor, Dr. A. E. Thomas, who has made use of the remedy to a considerable extent.

Description.—"The Silk Weed has simple stems, from three to five feet high, with opposite lanceolate oblong, petiolate leaves, downy on their under surface. The flowers are large, of a pale purple color, sweet scented, and arranged in nodding umbels, which are two or three in number. The nectary is bidentate. The pod or follicle is covered with sharp prickles, and contains a large quantity of silky seed down, which has been sometimes

used as a substitute for fur in the manufacture of hats, and for feathers in beds and pillows.

This species of asclepias is very common in the United States, growing in sandy fields, on the road sides, and on the banks of streams from New England to Virginia. It flowers in July and August. It gives out a white juice when wounded, and hence has received the name of "milk weed," by which it is frequently called." Such is the description of this plant given by Dr. Wood.

It is also known as the "Bitter Root." The root is the part employed which should be dug up in the latter part of September, after the stalk has become dry, or in the spring before the stalk has shot up. As found in the shops it is of various sizes, from that of a small quill to that of the little finger. In length it is from two to six inches, cylindrical, more or less wrinkled, longitudinal and brittle. It is composed of a thick exterior cortical portion covered with a thin epidermis, and presenting, when freshly broken, a lighter color than that of the exposed surface. Its medicinal virtues are communicated to boiling water and to alcohol.

Silk weed is a cathartic, emetic, tonic, and alterative. Possessing, as I think it does, the property of calming irritation and diminishing nervous excitability, it appears to be especially applicable in diseases connected with derangement of the hepatic system, and of the digestive organs generally.

It is held by some to be a fine emmenagogue. I myself made use of the remedy in two cases of difficult menstruation, one of fifteen months' and the other of two years' standing, with entire relief to both patients.

Within the last eight months I have seen it prescribed by Dr. Thomas in a number of uncomplicated cases of intermittent fever, given at night in sufficient quantity to insure its action on the bowels, and the following day in

small doses at intervals; and never in a single instance did it disappoint his expectations.

I have also witnessed the happiest results from its use in the treatment of chronic rheumatism.

It may be given in substance, or in the form of extract, infusion, or tincture. The dose of the powdered root is from ten to thirty grains; of the tincture, prepared by macerating two ounces of the pulverized root in one pint of diluted alcohol, from a half to three drachms; of the extract, from three to ten grains.

I am persuaded, though unable to specify the cases in which its employment is specially indicated, that it may often be advantageously substituted for, or combined with iodine in the treatment of scrofula.

I have had opportunities of closely observing the beneficial results from its administration in three or four cases of this affection. I will mention but one:

Orry, a slave, aged about twenty-two years, and of delicate constitution. Her father is a mulatto of dissipated habits, and has been laboring under a syphilitic taint for many years. The mother is a slight but healthy woman. The patient has ever been delicate and fragile, evidently showing the strumous diathesis. In the fall of 1849, she was under the treatment of Dr. C——, for hepatitis. His treatment was a mercurial course, combined with blisters, tonics, etc. After being under treatment some months she was discharged, with the symptoms much ameliorated, but with the caution that the disease might return. During the following summer and autumnal months she enjoyed a tolerable state of health, but on the return of cold and wet weather, she was taken with the symptoms of scrofula, enlargement of the glands of the neck, the lips and conjunctiva became swollen to their utmost tension; so much so as to become inverted. The whole system became disordered, and the utmost emaciation ensued.

Dr. Thomas's treatment, at first, was that most in vogue for the cure of this affection, viz: iodine, iodide of potassium, arsenic, etc., combined with cod-liver oil.

The most active and prominent symptoms were for a time allayed, but soon resumed their activity; and her general health was such as to induce her owner to believe that she was incurable.

Dr. Thomas having met with success in the treatment of a similar case by the silk weed, determined to try it in this instance. Two grains of the extract were given night and morning, gradually increasing the dose to five grains. This, in conjunction with a proper nourishing diet, brought about, in the course of two weeks, a decided improvement in the condition of the patient. This simple treatment was continued with but little variation for about four months, by which she was gradually restored to health, and she is at this time enjoying better health than she has done for five years, weighs more than she ever did before, and is able to do her full task.

I have also witnessed the happiest results from the use of asclepias in dyspepsia. In one instance, a gentleman who had been dyspeptic for several years, and, to use his own language, "had swallowed a small drug store," was prevailed upon to try the silk weed, and, contrary to his own expectations, he was in a short space of time much benefited. He became fond of the remedy and substituted it for his tobacco, and in the end was relieved of all dyspeptic symptoms. The following is a case which I deem worthy of notice:

Mr. B., a farmer, aged 38, accustomed to regular exercise, and to indulge in the good things of the table; of sanguine temperament and strumous habit. About the beginning of 1845, according to his own account, he began to complain of indigestion, characterized by loss of appetite and strength, by profuse perspiration on mak-

ing slight muscular exertion, and by increasing emaciation. He was treated actively, and received by different hands a variety of prescriptions, but with only one effect—the aggravation of his sufferings. After long trial and many disappointments, he left his home for the various watering places, but found no relief. In the fall of 1848, he went to Cuba in the hope of regaining his health. He was however disappointed, and after a trial of five months of the climate and practitioners, he returned to his home, depressed in mind and wasted in body. On his arrival, in April, 1849, he was pale and emaciated, his countenance and manner indicated both mental and bodily suffering; his appetite was depraved and he was disposed to indulge it; he was suffering from headache, flatulence, and palpitations; from constant restlessness of mind, and was particularly suspicious of the presence of consumption. His skin was pale and sallow, tongue loaded, bowels irregular, and the evacuations unhealthy. He was incapable of mental application, and had well nigh abandoned all hope of being restored to health. Such was the condition of the patient when he applied to Dr. Thomas for relief. After learning the full particulars of the case Dr. T. determined to put him upon the silk weed. He accordingly commenced with half a drachm of the tincture twice a day, and gradually increased the dose to two drachms. His diet was regulated, which consisted of milk, farinaceous vegetables, and animal food in small quantity. In four weeks from the commencement of this mode of treatment, the general appearance of the patient was much improved, and the dyspeptic and nervous symptoms were less distressing.

A perseverance in the same mode of treatment was strictly enjoined, and the patient continued gradually to improve in looks and spirits. He regained his lost powers; his manner and conduct no longer indicated that he thought only of himself and his ailments; and in the course

of a few months, under the silk week, he regained his lost flesh and was restored to health.

February, 1852.

Art. II.—*On the Treatment of Enlarged Spleen.* By W. Y. Gadbury, M. D., of Benton, Mississippi.

The frequent occurrence of enlarged spleen renders it an object of special interest to the southern practitioner. Its intimate connection with the other viscera of the abdomen by means of the portal circulation; the elasticity of its tissues, the great relative size and horizontal course of its vessels, and the diminished ratio of mortality resulting from disease in it when compared with other organs of the animal economy, all indicate a wise provision of nature for the protection of the more important secretory organs from great influxes of blood in disease. The diagnosis and pathology of enlarged spleen are familiar to all, requiring no description here; but that its treatment is frequently unsuccessful is proved by the following quotation from standard authors. Dr. Dickson says, "the treatment of this disease is unsettled and by no means successful. When it becomes chronic our task is extremely difficult." Prof. Drake, whose experience in this disease entitles his opinion to more weight than that of any other author, says, in his great work on *Diseases of the Valley of North America*, that "in many instances it is impossible to reduce enlarged spleen while the patient continues in the locality where it originated."

These observations doubtless reflect the opinions of a majority of the profession. The failure to effect a cure, in many instances, is owing probably to oversight of the complications attending its progress. It is frequently associated with dyspepsia, with derangement of the hepatic and renal functions, and with general cachexia, anasarca,

&c. I lately had the care of a case which resisted all treatment until after the administration, empirically, of a vermifuge, when my patient was relieved after the discharge of fifty or more lumbricoides.

The depraved condition of the system generally contraindicates depletion as recommended by some authors. Purgatives are sometimes inadmissible, on account of diarrhea, and even when the bowels are torpid their continuance for a sufficient length of time to effect a cure by revulsion, may establish an irritation in the alimentary canal more intractable than the original disorder, particularly in southern latitudes. The frequent use of mercury is to be deprecated, as it aggravates the general cachexy The internal exhibition of the preparations of iodine is a practice highly extolled, but I have seen them fail oftener than succeed, and a persistence in their use will almost certainly bring on an unhealthy condition of the primæ viæ. They are sometimes serviceable in strumous habits where the bowels are healthy.

Quinine, that great panacea of the south, often succeeds in relieving an enlarged spleen before fibrinous depositions take place; after this it loses its controlling influence over this organ to a great extent. Its efficacy in suspending intermittent paroxysms ought not to be lost sight of as a preparatory step for a radical cure. The following combination will generally succeed in recent cases: ℞. Sulph. quinine, ʒj. Aquæ font. ℥viii., Acid. sulph, aromat. ʒij.: mix and add muriate of ammonia and cit. potass, áá. ʒij. Dose, a tablespoonful morning, noon, and night. The muriate of ammonia renders it so unpleasant to take, that patients can seldom be persuaded to continue its use long at a time; but, it may be remarked, this is no great objection to its use in hospital practice, or among our slave patients, where degustation is not much consulted.

Chalybeates are justly celebrated for their efficacy in

this disease, and their union with alteratives and depuratives would seem to be indicated. Some four years since a case presented itself, which had resisted every method of treatment for two years, and in which I was induced to try the Liquor Oxysulphas Ferri, according to a recipe in the fifth number of Braithwait's Retrospect, (page 68) which is as follows:

℞. Ferri sulphat, ℥ij. to ℥iij., Acid. nitric. ℥iij., Aquæ destillat. ℥iss.: rub the nitric acid with the sulphate of iron for fifteen minutes; then add the distilled water. The patient was ordered to take ten drops gradually increased to fifteen three times per day in a wine glassful of water. After the continuance of this remedy for two months, the chills ceased and have not as yet returned. The spleen under its use returned to its natural size. The successful treatment of this case induced me to try the following combination, which has proved universally successful when its use was continued for four or six weeks:

℞. Liquor Oxysulphat. Ferri ℥iv., Aquæ Cinnamomi, ℥viij., Sulphat. Quin., ℥j.: mix, and add cit. potass ℥ij. to ℥iij. Dose, a tablespoonful morning, noon, and night. The dose is diminished as the cure progresses. During the administration of this remedy the patient is required to rub daily the splenic region with an ointment made by mixing iodine and basilicon ointment, over which is to be applied a flannel bandage, made as a lace jacket, and to be tightened every day; suspenders should be attached to prevent its rolling upon itself, and make it agreeable to wear. This gives support, and excites the absorbents to action. If the bowels are torpid, the patient may take Pil. Hydrarg, grs. x., Comp. ext. coloycinth, grs. v., for two or three nights, and afterwards regulate their action with soap, aloes, and rhubarb.

This *spleen* mixture is peculiarly adapted to dyspeptic patients, in no instance in my practice having disagreed with the bowels, but on the other hand regulating them

when torpid without any perceptible purgative effect. It has the combined properties of a hepatic and renal emulgent, atiperiodic, alterative and tonic. Forty inveterate cases were thus successfully treated during the last two years, and I have yet to hear of an instance where a relapse has taken place. Under its use the chills cease to return, the digestive organs regain their natural powers, and the swarthy hue, so common in this disease, gives place to the ruddy complexion of health; the nervous system is invigorated and the man is again himself.

April, 1852.

Art. III.—*A Case of Secondary Syphilis.* By Robert Durrett, M. D.

John Adams, about 17 years of age, a native of Kentucky, a mason by occupation, was admitted into the hospital March 23d, 1852. He states that his attention was attracted, about the middle of January last, "to a small yellow speck upon the prepuce." Two or three days afterwards the parts became so much swollen that it was impossible to retract the prepuce. Sanguineous purulent matter was discharged in considerable quantities from the part.

He entered the N. O. Hospital; received local treatment; remained 26 days; and was discharged cured as he thought about the 25th February.

Actual condition March 23d, 1852—Face, body and extremities literally covered with pustular eruption, with extensive ulceration about the external genital organs This eruption was discovered by the patient some twelve days previous to his admission into our Hospital.

Treatment.—Donovan's solution ter in die, and yellow wash to ulcers. This treatment was contined until the 3d of April, without any apparent benefit; but on the contrary new pustules appeared daily.

April 3d.—The patient is put upon protoiodid hydrarg.

April 4th.—The patient vomits frequently, and says his medicine makes him sick. He has erysipelas of the face, with considerable edema about the eyes. Ordered cold to face; a pill of blue mass, and Pulv. Dover, each grs. v. every four hours.

April 7th.—Patient's face is painted with tinct. iodine.

April 9th.—Patient relieved of erysipelas; discontinued blue mass; and resumed protoiod. hydrarg.

April 10th.—Genital organs very much enlarged by serous infiltration into cellular tissue, which is relieved by the application of acetate of lead and opium.

April 11th.—Patient mercurialized, pustular eruption disappearing.

April 13th.—Pustular eruption entirely disappeared, and the papular ensues over the entire body, resembling at a distacce *measles*. Stop mercury.

April 19th.—Papular eruption disappearing.

April 22d.—Papular eruptions entirely gone, leaving a squamous condition of the skin.

May 1st.—The patient is discharged cured, 38 days after he entered the Hospital, and near three months and a half after the appearance of syphilitic disease.

Not the least interesting feature in this case is the ensuing of the papulæ upon the disappearance of the pustular eruption, while the patient was under the specific effects of mercury. But in this, as in all cases, we should not stop short when surprised at the effects of medicine. The phenomena should be observed and the causes investigated. The appearance of this new eruption was not the effect of the remedy, but the gradual subsidence of the severe symptoms of the disease.

Louisville Marine Hospital, May 8th, 1852.

ART. IV.—*On the Use of Oxide of Silver.* By J. V. WITHERS, M. D., of Brandenburg, Ky.

I look upon this preparation of silver as being possessed of far greater medicinal properties than medical authorities generally ascribe to it.

The United States' Dispensatory places it where it but rarely falls under the notice of the reader. Dunglison on *New Remedies* gives it a more prominent position; but you may travel for days, and not find a grain of it in the physician's shop. Speak to them on the subject of its medicinal properties, and their ideas are vague and confused, many having not more than listened to or casually glanced over its name and history. Now I do not expect that my pen will give it any superior claims to the profession, or introduce it into general use; but I wish to add my experience and observations respecting its qualities as a curative agent, and to ask of practitioners a more general investigation of its merits.

I have been using it in my practice for about three years, and I must say it has come as near if not nearer producing the effects desired, with fewer failures, than any one remedy I have employed in that time.

What are the indications for its employment? It has been more frequently used in the complaints of females—those cases at or about the change of life, where there is great derangement of the digestive organs, pain on pressure over the epigastrium, a constant burning in the stomach, febrile excitement at night, slight redness of the tongue, eructations, horripilations, &c. In these cases the bowels are subject to too great laxness, alternating with constipation; uterine hemorrhage every two, four, or six weeks. Given in half grain doses, made into pills, three times a day, one hour before eating, the oxide of silver has not failed, in a single instance, of relieving or greatly mitigating the sufferings of the patient in such cases.

They commence improving immediately, when, in many instances, other remedies had to all appearance aggravated their condition. I have contined the remedy until as much as 40, 60, and even 80 grs. have been given. The uterine hemorrhage is invariably moderated, the stomach and bowels improved or restored to their functions; sleep returns, and the patient again becomes cheerful, whereas before she was gloomy and morose, constantly dwelling on her internal uneasy sensations.

The mucous membrane of the stomach is clearly in a state of sub-acute inflammation, in such cases; the disorder of the bowels, there is reason to believe, is primarily of a similar character; or it may be that a secondary functional derangement results from the failure of the stomach to perform its function. The lining membrane of the uterus is doubtless in a like situation. I give the Oxide of silver to remove these morbid conditions, and, as I have already remarked, it has never failed to do so in a triumphant manner. I hold that it must act as an alterative, and especially upon the mucous membranes. In what manner it acts I can no more explain than I can tell how quinine will cut short a quotidian, or how mercury arrests the development of fibrine in the blood. They are ultimate facts which rest upon enlarged experience and observation.

The result of my experience is, that the oxide is superior to the nitrate of silver, and may be prescribed with great advantage in those cases of chronic dysentery, and diarrhea, in which the latter has been recommended by writers.

January, 1852.

REVIEWS.

ART. V.—*Essays on Life, Sleep, Pain, etc.* By SAMUL H. DICKSON, M. D., Professor of Institutes and Practice of Medicine in the Medical College of the State of South Carolina, etc. Philadelphia: Blanchard & Lea. 12mo. pp. 301. 1852.

This is a pleasing little volume, and can not fail to be extensively read. The accomplished author has handled his subjects in a manner to recommend his Essays to the general as well as the professional reader; and they who dissent from his views on certain controverted points, or question the soundness of some of his speculations, must yet be interested in his facts and pleased by his polished, graceful style. While reading them we were often carried back in memory to the delightful hours which we spent, while still a boy, reading some of the "*Inquiries*" and the "*Lectures*" of our great Rush. There is in them the same freedom from the technicalities of science, the same lucid, simple style, the same appositeness of anecdote and illustration that we so much admired in the writings of that favorite author. They have the soul of science without its rigid form. The author places his subjects in a point of view to interest all readers.

The first essay treats of Life. In all the range of physiology or metaphysics, there are few more difficult subjects; and we are constrained to say that, while Dr. Dickson has

exposed some of the errors of others who have written on the subject, the nature of the vital principle remains as obscure as ever. He is not more fortunate than the many other ingenious philosophers who have attempted to lift the veil that covers it. Life has been referred by some of the most eminent physiologists of the day to "organization." This view our author opposes, and in our judgment successfully. Life can not be the *result* of organization, for then organization could never occur. Life is the *cause* of organization; its special shape and form are the creation of the vital principle. There is a force—a *vis vitæ*—in the egg or seed, which determines and evolves all the parts of the organism. Organization is its consequence. The germ is placed under favorable circumstances as to heat, moisture, and nutrition, and the pre-ordained animal or plant is developed in all its organs and textures. From generation to generation, this vital force continues to perpetuate the shape, the size, and the character of the parents in their offspring. The germs are alike as to size and structure--we can detect no difference between them--and yet one grows into a fish, and another into a reptile--one into a bird, another into a quadruped. It is the principle of vitality, communicated by the parent to the germ, which determines the family or species. It is a *peculiar* principle. It has many attributes in common with electricity, but we can not agree with Humboldt, that it is but "a modification of the ordinary forces of matter acting under peculiar conditions." On the contrary, we would say with our author,—

It is not a *quality*, like hardness, softness, &c., but a power belonging to them derivatively, as I shall show hereafter, a property with which they are endowed on coming into existence in the forms known as organic. It is not oxygen, as Girtanner suggests; Matteucci gives abundant reasons for inferring that it is not electricity, as Abernethy and Wilson Philip were disposed to believe,

and as it is now quite fashionable to suggest in the use of the terms electro-biology, &c.; nor is it a presiding genius, an archæus, an almost or quite intelligent agent, as Stahl and Prout have hinted; nor a mere pre-established harmony, as Aristoxenus and Leibnitz imagined; nor the product of organization, as Lawrence, Prichard, Mayo, and so many others maintain; nor is it to be found, as Cuvier, Bichat, and Coleridge intimate, rather darkly, I think, in the *tout ensemble* of the functions or anything else—to borrow the parliamentary expression of Mr. Joseph Hume, of financial fame, "the sum total of the whole."

If, as we have said, the vital force agrees in many things with chemical attraction and electricity, in many things it is opposed to them. It is superior to them, and controls them, and, in organized matter, they only become triumphant when it has become extinct. It has always appeared to us in the highest degree illogical to confound forces, the phenomena of which are so dissimilar. There is correlation between them, but they can not be the same.

After all, we have to go back to a great first cause for the source of this strange principle, which, out of bodies apparently identical, developes organisms so unlike each other. With Dr. Dickson, we "find a Supreme Being absolutely necessary in philosophy, as Robespierre did in social life." We refer the beginning and the transmission of this principle to Him. He created it, and by a power received from Him it has descended through countless generations, causing the species to perpetuate themselves each after their kind.

The very simplest of its manifestations are inexpressibly difficult to account for or comprehend; its very earliest influences altogether inscrutable; its apparent spontaniety of action, and its passive resistance to the effect of external agencies, equally inexplicable; and, as we contemplate it more and more closely, we are filled with a deepening conviction that there is nothing in the vast storehouse of nature more calculated to awaken intense curiosity, to invite assiduous investigation, and to give

rise to solemn consideration, than the construction and movements of a living body, "fearfully and wonderfully made," and still more fearfully and wonderfully endowed with almost infinite capacities for action, for enjoyment, and for suffering. Let us humbly acknowledge that of this principle in the abstract we have hitherto formed very inadequate and unsatisfactory conceptions, and shall perhaps remain unsuccessful in our researches concerning it. It may be that He alone who possesses within himself this mysterious attribute, and who, of his infinite power and benevolence, has communicated it to a part of his creation, can fully comprehend its nature and its essence.

Truly, this power of life is a standing enigma. As beautifully expressed by Prof. Anstead, "it is no less a mystery to us now, than it was when man first speculated on its nature. We know not what it is, why it is, or how it is; we only know that it exists, and is everywhere present. At all degrees of temperature, from the surface of snow to boiling water of hot springs; in all soils, from the rich land of the tropics to the barren desert; on the whitened surface of pure salt, and on the naked rock on the mountain summit; in all degrees of light, from the full glare of sunshine to the darkest recesses of the rocky cavern; in air and in water; upon the earth and even beneath the earth; at all times, from the first introduction of living beings until now—we find pressing in on every side abundant evidence of this marvelous fact, this perpetual miracle. We are surrounded by the results of life; but we can not even imagine the nature of the broad line of demarcation, which seems, as it were, to form an impassable gulf between that which we call living, and that which is only dead matter." But if we may not attain to a knowledge of the abstract vital principle, there is no reason why we should not speculate about its manifestations. The subject is full of interest, and we will pursue some of the topics suggested by our author.

Dr. Dickson refers to the difficulty of drawing a clear line of demarcation between animals and vegetables, and shows that it is hardly less difficult to distinguish between instinct and the intellectual faculties. He even allows that bees, birds, and our domestic animals act from the promptings of hope and the suggestions of foresight. His language is:

We can know very little of the extension of feeling and sentiment through the lower orders of animals, for want of communication and intelligible expression; but the doctrine which ascribes to man exclusively the feeling of hope or anticipation must be abandoned when we reflect that all domesticated creatures expect their feeding time with habitual impatience, and press homeward before it arrives; not to dwell upon the promptings of what is called instinct, leading to the building of nests, the migrations of numerous tribes, the hoarding of food by several, and, among bees, the evidently purposed conversion of the immature insect of the hive into a great and worshipped queen, by a peculiar system of appropriate nutrition.

Our view of these phenomena is different. In the case of these animals, we conjecture, it is not an emotion allied to hope, or an exercise of mind like prescience, which leads to the actions described. They are very curious; they look very much like the operations of mind—so much that Todd and Bowman refer them to the mind of the Creator operating through these creatures. What could be more like the movements of an intelligent being than the wasp's burying in the sand with its egg the fly upon which the young maggot when hatched is to feed? For it is to be considered that the wasp itself feeds not upon flies or other animal food, but upon saccharine substances. Still we regard all these actions as purely *instinctive;* and suppose that the bee is no more obeying reason when it stores its cells, or feeds the embryo queen with food suitable for it, than the alligator is acting in obedience to rage

when he turns his headless trunk suddenly in the direction of the hand that pricks it. They are actions which another part of the cerebral mass than that concerned in intellection, controls. They go on, just as respiration goes on, independently and in the absence of the hemispheres—under the influence of nervous centres which have no connection with mind or emotion.

On another point we are are compelled to dissent from the views of our author, who holds that there are some exceptions to the rule, as expressed by Richerand, that "plants may be considered the laboratories in which nature prepares aliments for animals." The earth-worm, and numerous other allied tribes, he says, "subsist upon materials derived from the mineral kingdom." "Nay," he adds upon the authority of Humboldt, "some of the wretched hordes of Southern America support their miserable lives, at least for a considerable portion of the year, upon a diet of clay." Nevertheless, we apprehend, the rule of Richerand will be found to be universal, and the exceptions merely apparent. The earth-worm finds organic matter in the mineral substances upon which it seems to subsist, and the clay is swallowed by the miserable people to give distension to the stomach. It has no power of supporting life, and the savages would die as soon with it as without it, if they derived nourishment from no other source. Many of the lowest tribes of animals feed upon organic matter in a state of decomposition, as it is just about to return to the inorganic kingdom, and thus restore it, by a shorter route, to the living world; but none, it is believed, find nutriment in substances strictly mineral. Plants obtain their aliment from inorganic matters, and out of them elaborate the food of animals. We take it, few points in physiology are better settled than this. We believe the rule is without an exception. The mushroom grows luxuriantly near decaying organic matter; but it is the products of the decomposition—the

carbonic acid, ammonia, etc.—and not the organic matter itself that it subsists upon.

Dr. Dickson is no believer in spontaneous generation; but, at the same time, he does not accept the principle, *omne ab ovo*. Life, he agrees with Cuvier, "can be born only of life;" but then, in his view, it does not "necessarily originate through the medium of a seed, or an egg, or germ of any kind." He remarks:

> The decay of organized bodies seems, as one of its uniform results, to effect or offer the separation and elimination of organized corpuscles. The vitality which has been diffused through the whole mass, and does not desert it at once or simultaneously in all its parts, may *in transitu* fix in some of the myriads of disintegrated particles, effecting the diversified organization which we see, and producing the infinite variety of infusory animalculæ and vegetable minims, algæ or tremellæ, the absolute nature of which, as I have already said, is undetermined. Nay, it is perhaps in itself indeterminate, for the primary globule or minute cell seems, whether vegetable or animal, to be identical in structure and composition, as far as these are or can be known.

The meaning of this passage, if we understand the learned author is, that a large animal suffering putrefaction is broken up into a great number of small ones! In another place he says, "I see no reason for limiting the transmission of life through identical or even similar forms." An organism of great size, he supposes, may eliminate "organized corpuscles," that grow into animals wholly unlike the body that gave them birth; not only unlike, but vastly inferior. "The derived life," as he expresses it, "originating in the processes of decay and decomposition, is always inferior, base, and fragmentary; worthy of its source in the compost heap and charnel-house; sinking and retrograding, as it would seem, of necessity; never tending upwards, or self-elevating."

We should rather say, that these "organized corpuscles," which putrefying bodies afford, are ova deposited in them by insects. We confess, the idea that such corpuscles may be "eliminated" by decaying animal matter strikes us as most irrational. All analogy condemns it. It is better than the Lamarckian hypothesis, in that the corpuscles are not held to be developed into higher organisms. If we had to choose between the two doctrines, we would rather believe in the downward tendency of such generations, than be obliged to accept the speculation, that they pass gradually from this low state into nobler forms, finally becoming men; but either view is bad enough. Both doctrines rest upon a slender basis, which the current of scientific discovery is continually wearing away. One strong hold after another has been given up by the advocates of spontaneous generation, until now they have hardly any ground left to stand upon. What was obscure has been rendered clear; what seemed inexplicable has been explained by the persevering researches of naturalists. Botanists and physiologists have followed up the process of generation, and have succeeded in showing, that in almost all the cases where plants or animals have appeared to be generated spontaneously, they came in reality from progenitors. The ova or seed that produced them have been detected in nearly all these instances, and there is no room to question that those in which they have not been found are an exception to the law. If the fungi and algæ, the rotifera and entozoa can be shown to perpetuate their species by germs, there is no reason to doubt that all the allied, and much more all the higher tribes, are propagated after the same fashion. In a word, we must accept as a fundamental truth of physiological science, "that *every living organism has had its origin in a pre-existing organism.*" There is no longer any excuse for rejecting or doubting it. What Carpenter expresses in reference to it is coming to be the creed of

the whole scientific world. That able writer says: "The doctrine of 'spontaneous generation,' or the supposed origination of organized structures *de novo* out of assemblages of inorganic particles, although at different times sustained with a considerable show of argument, based on a specious array of facts, can not now be said to have any claim whatever to be received as even a possible hppothesis; all the facts on which it claimed to rest having either been themselves disproved, or having been found satisfactorily explicable on the general principle *omne vivum ex ovo*."

Our author's hypothesis is but a modification of this doctrine, and therefore obnoxious to all the objections urged against it. The difference to us seems trifling between the origin of life from inorganic matter, and its generation among particles of putrefying animal bodies.

The subject of the second essay is *Sleep*, the repose of the nervous system. Where there is no nervous system there is no sleep. The "sleep of plants" is like their "love," a thing that has no existence except in the imagination of poets. It is an animal function, and those organs only that minister to animal life are subject to it. The heart and the lungs never sleep.

It is still an undetermined question in physiology what causes sleep, which Carpenter defines to be "the state of suspension of the sensory and motor functions." What is the condition of the brain in sleep? Is the state the same in all kinds of sleep, natural, morbid, and mesmeric? We give our author's remarks on this subject:

In examining closely the circumstances presented during the state of sleep, we shall discover, I think, that the concurrence of two obvious elements is necessary to its production. Any living fibre, when subjected to inspection, nay, any living globule of any living fluid, presents, when in action, the condition of vital tension as the most evident proof of its activity; an erethism, a constitutional

or compositional excitement, greater or less in proportion to the degree of its vitality and the energy of its action. But the tension of the tissues, of which the globules of living fluids are destined to form parts by deposition and fixation, can not be always sustained at an equable rate, but must undergo alternately at proper periods a comparative relaxation. Throughout the waking hours, various portions of the nervous centres are in varying states of tension and erethism, and a certain degree of relief is obtained from time to time by each, through the removal or change of impression and action from one portion to another. After a while, however, they all grow weary, and, as the old writers correctly imagined, undergo a collapse, by the subsidence of the tension or erethism of which I have spoken. But the cerebral organ is contained in an unyielding case of bone, and can not thus shrink, unless the space to be made vacant by its shrinking be filled up in some mode. Hence arises the intermixture of the second element whose concurrence I contemplate as necessary, the determination of blood, namely, to the cerebral mass, and its congestion in the larger vessels of the brain, chiefly as I suppose the veins and sinuses, whose structure and arrangement are somewhat peculiar, and well adapted to receive and sustain this congestion. It is true that, between the immediately investing membranes of the brain, and its unyielding bony case, there is interposed for purposes of support and defence the cerebro-spinal fluid, which varies in amount according to a thousand varying contingencies of the animal economy. But the rapid, nay, the instantaneous transitions from the sleeping to the waking state, do not admit of any satisfactory reference to such changes in quantity, which must require notable and comparatively prolonged intervals of time, occupied by secretion and absorption.

The fact of cerebral collapse during sleep is established by observation in cases where, the bone being deficient, the organ was liable to external pressure. Blumenbach states that he himself witnessed in one person a sinking of the brain whenever be was asleep, and a swelling when he awoke. Dendy relates the story of a woman who, at Montpellier, in 1841, had lost part of the skull, the brain and its membranes being laid bare. When she was in deep sleep, the brain lay in the skull almost motionless;

when she was dreaming, it became elevated; and when her dreams were on vivid or animating subjects, as proved by her afterwards relating them, but more especially when she was awake, the brain was protruded through the cranial aperture. In another case, Combe observed, through an opening in the skull, that the brain was elevated during an apparent dream.

He goes on to speak thus of sleep induced by artificial means:

This theory or hypothesis of the physical causation of natural sleep applies well to the explanation of some of the enforced or artificial sleeps. Suppose either of these two elements producible at will, and it tends to generate the other; the undue predominance of either constituting the special character of the sleep. Thus, if you diminish the cerebral tension, no matter how, by a long story, a dull sermon, or (*e. g.*) a tedious essay; or by fatigue, which exhausts the nervous power generally; or by wasting disease ("I must sleep now," exclaimed the dying Byron); or by inanition, or large drafts from the fluids of the body in any mode—congestion takes place in the cerebral veins and sinuses, the eye reddens and is suffused, the sight grows dim, the face, except in the bloodless, flushes somewhat, the lids droop, the muscles relax, and slumber invades us.

If, on the other hand, you promote in any way the entrance of blood into the vessels of the head, while you avoid any excitement which may arouse the mind, and thus oppose a cerebral tension to the dilatation of the vessels within the cranium, you will bring on sleep. Thus act rocking in a cradle; the oscillations of a hammock; the gyrations of a circular swing; almost infalliby the motion communicated by a body moving round upon its own centre, as when lying with head to the circumference, and feet to the centre of a platform, revolving like a millstone. Mesmeric sleep has thus been accounted for. A position or attitude of muscular relaxation is arranged; all mental action repressed—all sensation, and every impression, interrupted or veiled; a quiet attention directed to the conjuror, who makes no sound, and avoids all rude movement; under these circumstances, the cerebral ere-

thism of thought, motion, and emotion gradually subsides, while the vascular determination is in a gentle way aided by the fixation of the eye, on which so much stress is laid by Baird, of Newcastle, and Ratcliffe Hall. As to the effect of ether, chloroform, and other anæsthetics, from which exulting humanity has already derived so much benefit, and indulges so much larger and hopeful anticipations, it presents a very complicated and difficult problem. Perhaps it is, in part, owing to the quick absorption of the exhaled fluids by the blood in the lungs, which is transmitted to the delicate and yielding texture of the cerebral fibres, impregnated with their highly elastic vapor, adapted to exert within the vessels a powerful, though very transient intravascular pressure. They are all, I believe, of this rapidly vaporizable and elastic character, undergoing great expansion by moderate increase of temperature.

Certain pathological facts are consistent with, if they are not rather confirmatory of, this view of the condition of the brain in sleep. If Solly be right, and there is no positive reason to pronounce him otherwise, delirium tremens, of all maladies known to us the one in which sleeplessness is most specially the prominent element, presents a remarkably anemic state of the brain; the deficiency of blood in the organ totally prohibiting the vascular congestion which I maintain to be a necessary requisite in sleep; there being, at the same time, a most extrordinary intensity of erethism or cerebral irritation. Chloroform, by subduing the latter, removes the former evil, and has been found among the most certain and prompt remedies for this wretched effect of intemperance.

Marshall Hall contends that convulsion can not happen until congestion in the head has been produced by the spastic contraction of the muscles of the neck, the platysma myoides particularly, which prevents the return of blood downwards through the large veins. Now sleep, or a condition strongly resembling it, either immediately precedes or attends simultaneously, or follows an attack of convulsions. M. Hall advises that the epileptic be not suffered, for this reason, to sleep soundly. We infer that a patient sleeps through a convulsive paroxysm too, because he is happily insensible at the time or retains no memory of consciousness; and all are familiar with the

profound slumber which usually terminates these dreaded invasions, of whatever character, hysteric or epileptic.

The relations of Sleep to disease are curious. Thus, some maladies select the night season as the period of attack, and others seem to prefer the day. Asthma, for example, "almost always assails during the first heavy sleep on lying down." The invasions of cholera are most frequent at night, and at a late hour, after sleep has lasted a good while. "Colic awakes the patient often. Diarrhea and dysentery begin when the night's sleep is about to end." Some fevers are most apt to invade in the day time; "yellow fever often arouses the startled slumberer." "In thirty years of inquiry," says Dr. D., "I have heard of very few instances, not more than *six* in all, of the supervention of *intermittent*, the occurrence of a *chill*, in the state of sleep. Malarious *remittent* seldom or never, I know no example, attacks during sleep."

Sleep has hygienic bearings of an important character. Few things exert a more controlling influence upon digestion than sleep, and many cases of dyspepsia may be traced to its indiscreet abridgment. Its effect upon the state of the mind is not less decided. In a state of sleeplessness, "the temper becomes harsh and sour; the man is petulant, testy, unreasonable, and liable to great depression of spirits." Let him enjoy a night of sound repose, and he will wake up an altered being. His irascibility will be gone, and his spirits have become buoyant. Many persons are thus vibrating between these extremes of comfort and wretchedness, because they do not properly heed the admonitions of "nature's sweet restorer." Every one is aware how salutary is this repose of the nervous system to the sick. No one will question that there is great truth in the remarks of our author, that—

Sleep, quiet and profound, is, in a very large proportion of diseases, not only a good symptom, but positively and

beyond question remedial. It suspends many irritative, and some inflammatory affections. *Catarrhal* annoyances yield, for the time, to its gentle sway; it is the only hope of relief in numerous forms of agonizing *cephalalgia*. *Neuralgic* anguish of every kind is not only suspended while it continues, but, when regularly recurrent, has its tenacious periodicity interrupted most efficiently. Indeed, in almost all periodical affections, some advantage is sure to be derived from the use of narcotics, so timed as to put the patient soundly to sleep at, or a little before, the hour of their return. This is remarkably notable in the instance of malarious intermittents, which I have many scores of times put off by a soporific dose of opium. Indeed, I think most of the therapeutic benefits of opium, ascribed to its diaphoretic property, flow from its delightful influence in procuring sleep, a state almost incompatible with certain modes of irritation and inflammation; and this leads me to hope much similar advantage from the enlarging list of anæsthetics, in all forms of disease of which the combination of these elements constitutes the prominent feature of the first or invading stage.

One of the most dreaded of human maladies is unquestionably often a consequence of morbid vigilance. Dr. Brigham, who investigated the causes of insanity with remarkable assiduity and success, sets this down as paramount among them. According to his observation, sleeplessness continued beyond a certain period is pretty certain of ending in insanity.

In perfect sleep, there can be no consciousness, no dreaming, and from that state, in which the whole cerebral mass appears to be at rest, up to the state of somnambulism, there are endless grades of mental activity. The only difference between dreaming and somnambulism is, that the individual is more awake in the latter condition. Answers may be obtained, and action aroused by whispering in the ear, "low enough not to awaken, but loud enough to affect the sense of the sleeper." Beattie, who is quoted by our author, relates an instance of an officer played upon

by his comrades, who induced him, by whispers, to go through the whole ceremony of a duel, till waked by his pistol.

'He was told that he had fallen overboard, and began to imitate the movements of swimming: being warned that a shark was following him, he dived from his couch upon the floor. When he was notified that a battle had commenced, and was raging around him, he ran away."

A capital subject this officer would have made for the "*electro biologists*." His gifts were native to him and needed not the "passes" of mountebanks to awaken them. If it were more generally known that this state is one easily excited in many individuals by natural processes, the feats of these charlatans would soon cease to be the wonder of gaping multitudes. Dr. Dickson relates some remarkable examples of somnambulism, from which we select the following:—

The Lausanne Transactions contain the case of a somnambulist who sometimes opened his eyes to examine where he was, or where his inkstand stood, and then shut them again, dipping his pen every now and then, and writing on, but never opening his eyes while he wrote on from line to line regularly, though he corrected some errors of his pen and in spelling; "so much easier was it for him to refer to his *ideas* of the positions of things," says the relator, "than to his *perceptions* of them." Darwin mentions a young lady who occasionally in her sleep sung and recited poetry. In repeating some lines from Pope, she had forgotten a word, and began again, endeavoring to recollect it. It was shouted aloud several times in her ear, but to no purpose; yet, after many trials, she at length regained it herself.

From Hone's *Every Day Book* I take the following strange case, related since by Dendy: "A lad, Davis, æt. sixteen years, rose, got his whip, put on a spur, and went to the stable; not finding his saddle, he inquired for it; being asked what he wanted with it, he replied—'to go his round;' being a butcher's boy. He then got on the horse without a saddle, and was going out, but was stop-

ped and taken off by force. Mr. Ridge, a surgeon being sent for, stood by him some time, during which he thought himself at the turnpike gate, and took sixpence out of his pocket to pay the toll. It was returned to him, but he insisted on its being changed, and resisted an effort, made in jest to cheat him. While Mr. Ridge was bleeding him, he joined in the conversation. After an hour he awoke, went again to sleep, and was well next morning."

It is a question in which most persons have felt an interest at one time or another, how much ought a healthy man to sleep? We quote from Dr. D. in answer to the question:

The average proportion of time thus employed by our race may be stated pretty fairly, I think, at *one third.* The allotment of Sir William Jones, slightly altered from an old English poet, does not depart much from this standard:—

> "Seven hours to books, to soothing slumber seven;
> Ten to the world allot, and all to heaven."

The busy engagements of ambition and avarice may induce men to substract more or less from their due repose, but any considerable deduction must be made at great risk to both mind and body. Sir John Sinclair, who slept eight hours himself, says that, in his researches into the subject of longevity, he found long life under every circumstance, every course of habit; some old men being abstinent, some intemperate; some active, and some indolent; but all had slept well and long. Yet he gives a letter from a correspondent, recording the case of an old man of ninety-one who had slept through life but four hours a day. Alfred the Great slept eight hours, Jeremy Taylor but three. Dr. Gooch tells us of an individual who slept only fifteen minutes in the day; but this is scarcely credible. Bonaparte, during the greater part of his active life, was content with four or five hours' sleep; the same is said of Frederick the Great, and of John Hunter. I know familiarly a person whose average has been even lower than this; I have heard his wife say that they were married

four years before she had seen him asleep. Seneca is quoted as telling the incredible story of Mecænas, that he had passed three years without sleeping a single hour. Boerhaave says of himself that he was six weeks without sleep, from intense and continued study. Statements like these demand close examination and clear proof.

The propensity to sleep when it comes on in a natural way is one of the hardest to resist, and when brought on by *cold* is irresistible. "He who sleeps," said Solander in his famous antarctic expidition, "will wake no more," and yet a few hours after was so overcome by the desire that he begged his companions to indulge him just a little while. The certainty of dying from the indulgence was not enough to keep the philosopher awake. How overpowering the disposition often is when circumstances are unfavorable, most churches on any fair sabbath afternoon might testify; but there are few who do not know from experience how hard many times the balmy influence is to be won when most importunately wooed. In that queer book, so rich in thought and beautiful expression, the *Doctor*, Southey has given the various expedients for inducing sleep, and we quote the passage, with which Dr. Dickson's second essay concludes:

I put my arms out of bed; I turned the pillow for the sake of applying a cold surface to my cheek. I stretched my feet into the cold corner. I listened to the river, and to the ticking of my watch. I thought of all sleepy sounds, and all soporific things; the flow of water, the humming of bees, the motion of a boat, the waving of a field of corn, the nodding of a mandarin's head on the chimney-piece, a horse in a mill, the opera, Mr. Humdrum's conversation, Mr. Proser's poems, Mr. Laxative's speeches, Mr. Lengthy's sermons. I tried the device of my own childhood, and fancied that the bed revolved with me round and round. At length Morpheus reminded me of Dr. Torpedo's Divinity Lectures; where the voice, the manner, the matter, even the very atmosphere, and the streamy

candlelight, were all alike somnific; where he, who by strong effort lifted up his head, and forced open the reluctant eyes, never failed to see all around him asleep. Lettuces, cowslip wine, poppy syrup, mandragora, hop pillows, spider's web pills, and the whole tribe of narcotics up to bang and the black drop, would have failed, but this was irresistible; and thus, twenty years after date, I found benefit from having attended the course.

Pain is the subject of the third essay, the object, origin, and end of which is one of the dark problems about which metaphysicians have speculated in vain. Physicians have ever held it to be a part of their function to annul or alleviate it. How strange that anesthetics should have been objected to by some on the ground, that they are in contravention of a law of nature making pain a necessary evil! Dr. Dickson has not much patience with those who contend that pain is a useful guide to the surgeon in his operations. He says—

I should be very unwilling to employ for my own person any one who needed such warning or guidance as might be derived from my agonies while under the edge of a knife, or bound and dragged by his mechanical apparatus. His knowledge of physiology and anatomy, if as thorough as it ought to be, will require no such aid.

Dr. Dickson quotes a case of natural anesthesia reported by Prof. P. F. Eve. The man was operated upon for cataract; he was immoveable, and said he felt no pain. The remainder of the history is as follows:

Having had a finger injured in a rencontre, he bit it off himself, and spat it on the ground, not liking its appearance. He had an ulcer on the toe and foot for three years; from first to last, he said it never gave him the least pain. He had an abscess in his hand, which threatened his life, involving the whole forearm and arm with enormous swelling; it was opened repeatedly and freely, but during the whole time he experienced no pain. His neck having

been once pustulated by tartar emetic, he did not feel it at all, but ordered the application to be renewed. Prof. E. made three incisions on the back of his neck to relieve erysipelatous inflammation. "He was so unconscious of the operation, that, after it was performed, he asked that it should be done, that he might turn over in bed. He told his physician that he had never suffered pain from any cause whatever, until his last illness. He was a man of great probity, and never boasted of being insensible to pain. He had been at one time addicted to the free use of alcoholic potations."

The subject of the next essay is *Intellection*. No subject is more interesting, and it is here treated with great ability. Mind is referred by all to the brain, which is coming to be regarded by anatomists as a great ganglion or collection of ganglions, duplex in its formation, and susceptible, like other double organs, of disease in one hemisphere while the other is in a healthy condition. Upon this rests the doctrine of phrenology, "so clearly founded in well-ascertained truth, but pressed by its advocates into so many extremes of error." Dr. D. regards as questionable the occurrence of an absolute *monomania*, remarking—

I have never certainly seen any instance in which a *single faculty* or power of the mind was perverted *exclusively*; that is, allowing all others their normal range and capacity. I have examined many such, and have always found some collateral disorder and confusion. In medical jurisprudence, it is extremely unsafe to suggest or maintain the views which are becoming so prevalent in the present day on this point. Unless there were certain other exhibitions of mental aberration, I can not agree to hold guiltless a thief, simply because he exhibits an inordinate thieving propensity—nor a murderer, because he is urged on by a homicidal inclination—any more than I would acquit of the guilt of assault a morbidly pugnacious man. The doctrine is untenable and dangerous, and will, if pressed, lead to a cruel and savage reaction, as in the

case of Baker of Kentucky—where a furious maniac suffered the penalties of the law while howling defiance to all laws; a scene of inhumanity sufficient to have "hung the heavens with black."

Yet, believing in the duality of the brain he sees no reason to doubt that insanity may depend upon a diseased condition altogether confined to one hemisphere.

In such cases, alternate thoughts and actions will exhibit the contrasted character and state of the mind, and at times present a varying preponderance of power in the sound over the diseased hemisphere, and *vice versa*. Now, in these examples of double existence, we shall aid the sane man in his endeavor to govern the insane portion of himself, by retaining over him the influence of motive, in the accustomed and efficient forms of "hope of reward and fear of punishment."

He remarks thus on the propensity to suicide—

The mildest and most inoffensive person—one of the most regular in his habits, the most exact in his perceptions, the most upright in business, the most capable of transacting his affairs, and correctly dividing his property after death—may labor under an irresistible propensity to suicide. Have we forgotten the English minister, under whose government England attained her loftiest pinnacle of power, the termination of whose ambitious and highly successful career is told in a single epithet, alliterally compounded by one of his bitterest political enemies, "carotid artery cutting Castlereagh!" A second may be the subject of a vehement propensity to injure and destroy others, and yet shall be acute in business, and clear in his natural, moral, and religious views; and a third shall be under the absolute dominion of fancy, and subject to the strangest hallucinations, while capable of the full performance of all the offices of his station—a penetrating reasoner, a sound adviser, a valuable friend.

We confess we would rather adopt the prevailing belief, that the propensity to self-destruction is an evidence of insanity. The author continues—

Phrenologists have lately been engaged in hunting for an organ of self-destruction, and they will probably find it, as they have found so many other organs which must be separate, as they infer, because of the distinctive character of the faculties and propensities which depend upon their activity But Phrenology, though she has long located confidently the organs of destructiveness and combativeness, has not saved a single life by raising the friendly warning of danger from heads of evil conformation. She is only "wise after the event." So we must not indulge in too sanguine expectations of aid from her, in anticipating the inclination to shorten life, but proceed to examine whether there are any other indications by which we may be guided to our task of prevention. Suicide, the most desperate of human acts, is often the result of motives apparently trifling, and in such cases is apt to be committed with great apparent deliberation. The slighter shades of ennui have occasioned it, as in Dr. Darwin's patient, who complained to him that "a ride out in the morning, and a warm parlor, and a pack of cards in the evening, comprised all that life affords." We hardly wonder that, after fifty years of such a life, he got tired of it and shot himself. Montaigne and others afford us cases of suicide from the most transient slights and mortifications. These excite our surprise as well as horror; but there are many others which move all our sympathies. When we hear of the voluntary death of a woman who has lost her honor; of a monarch dethroned; of a warrior beaten in his last battle, as when Brutus falls upon his sword after the fatal field of Philippi; of a merchant irretrievably ruined in fortune and credit; of a physician whose professional reputation is hopelessly blasted, as in the melancholy case of the attendant on the Princess Charlotte, we are ready to acknowledge that, however we may be shocked at the deed, it is suggested by feelings common to our whole race. "Time, the great consoler," can alone blunt the acuteness of mental sufferings in instances like these, and restore the tolerance of life. It is

the *judgment* which is unsound in the suicide. Death is chosen as a refuge, because of the assumed impossibility of enduring the train of evils in prospect; just as the duellist goes out to meet his antagonist, because, if he refuse, he will be made to groan under an insupportable burden of obloquy and disgrace. A singular instance of suicide from disordered *perceptions*, however, came under my own notice a short time since, attended with such remarkable confusion and even uncertainty of personal identity that it deserves to be recorded. I was called hastily to see a man who had cut his own throat with a razor. It was exceedingly difficult to dress the wound of the patient on account of his earnest outcries against the ruffian who had held him down upon the floor and murdered him.

Whenever a sufficient motive, then, presents itself to prompt to suicide any unhappy sufferer from whatever cause, he should be carefully watched, and, if need be, restrained by efficient control. Beyond this, there are other circumstances that ought to excite suspicion. Burrows says that the propensity is most strongly marked in the eye and countenance, and that the look can scarcely be mistaken. I wish he had described it, so as to enable us to recognize it, which I confess I have failed to do. It has occurred to me to lose two patients in this way, whom I was attending for ordinary chronic complaints, without remarking in their appearance or manner anything striking or unaccustomed.

But we can extend our remarks upon this admirable work no further. The essays on *Hygiene* and *Death* are quite equal to any others in the volume, and if we had the space we would be glad to make numerous quotations from them. As it is, we can only commend them with the rest to the careful perusal of our brethren, assuring them that they will find the series one of the most interesting that the medical press of our country has lately brought forth.

ART. VI.—*Report of the Committee on Medical Education, appointed by the American Medical Association.* By W. HOOKER. M. D.

The Organizing of the American Medical Association Read before the Philadelphia County Medical Society, February, 1852. By the President, SAMUEL JACKSON, M. D.

It can not have failed to strike the most casual observer, that a great change has passed upon the character of the medical profession in America. The repose, the stillness, the complacency that marked it at the beginning of the present century are gone, and all is now activity, agitation, restlessness, innovation, and change. Everywhere the cry is for "reform." No one seems satisfied. The feeling is universal, that evils attach to the profession which ought to be remedied; that there are deficiencies in the present mode of medical education which ought to be corrected; that the public mind, so sadly under the dominion of quackery, ought to be enlightened and purified, that medicine may attain to its just rank among the learned professions. Not a few insist that the profession is retrograding. They proclaim that it is not now the lofty calling that it was in former times. They condemn the medical schools, depreciate the preliminary education of medical students, and complain of the estimation in which medical men are held by the community. Doubtless, there is too much complaining. The evils are exaggerated, and representations are made quite unjust to the profession. Medicine is not retrograding. No one who has studied its past history and is acquainted with its present condition, will affirm that it is. It is advancing—amid many difficulties, it is true—hindered by great impediments—marred by great deformities, and bearing along with it numerous evils—but still progressing.

But the discontent on this subject augurs well. It is a necessary condition to improvement; and it can hardly be

expected that men, when fired by the zeal of reformers, will not go too far. They will put their case in terms too strong. They are almost sure to exaggerate the errors they attack. But no great harm comes of it, for there are others who go as much too far in the direction of conservatism, and moderate men will take ground between the extreme parties. It would never do to rest where we are. A spirit of self-satisfaction would be fatal. There must be discussion, agitation, a war upon abuses, the demolition of error, strife, revolution, in order to progress. We hail with pleasure therefore the clamor for reform which salutes the ear on every side. It is ominous of good. The tempest will pass, and the sky will be all the more serene for the present din of the elements. The turbid and turbulent flood will run by, and the stream will be found widened, and deepened, and purified by the commotion.

A multitude of plans must be proposed and rejected before the faults complained of will be corrected. Our profession is not to be perfected in a day. We must have patience, and be satisfied to hasten slowly. "Too much importance, we think, has been generally attached to those means which are direct, and too little to those which are indirect in their application. Though these latter have been very commonly lost sight of, we deem them to be quite as essential as the former, in a system of efforts for the improvement of our profession." This is the language of Dr. Hooker, in the Report before us, and we entirely agree with him. We have but little faith in the efficacy of any of the direct means proposed, and the most undoubting confidence that great benefits will flow from the indirect action of the American Medical Association and other medical societies. Decided benefits, the result of its action, are already manifest, as all are ready to acknowledge except those who are too impatient to try any but radical measures.

Dr. Hooker animadverts upon that defect in the education of our medical students which has been so often the subject of complaint—the want of scholastic training. He says—

The laxness of practice which prevails in regard to the preliminary training of medical students, is one of the greatest obstacles in the way of raising the standard of education and attainment in the profession. One practice, which we believe is followed in nearly all our medical schools, has a peculiarly bad influence. We refer to the fact that all students are placed upon the same level in regard to the length of their required term of study before they can be candidates for a degree. There certainly should be a distinction made in this respect between those who have had a deficient preliminary education, and those who have graduated at some literary institution, or who have in some other way duly prepared themselves for the study of medicine. Such a distinction is absolutely necessary to a proper recognition of the importance of a suitable preliminary education, and we therefore recommend that it be adopted at once by all our medical schools.

There are many objections to the innovation here proposed, and we are fully convinced that it will never be carried out by the schools. The distinction would be odious and would not be tolerated by students or their preceptors. Let us see how the principle would operate. About one in twenty, possibly one in ten of the students in our country is a graduate of a literary institution; the tenth or twentieth would be permitted to take his degree in medicine after two or three years' study, while nine or nineteen would have to wait a year longer. Among that number it is not unreasonable to suppose there would be some his seniors in years, and perhaps much his superiors in natural gifts of mind and habits of study—those who, in the dissecting rooms and the public examinations, would show themselves to be far in advance of him in professional attainments. The young Hunter of mature

years and laborious habits, would be obliged to wait, while the favored bachelor of arts took his medical degree on reaching his majority. How long does any one suppose such a rule could be maintained in any medical institution in the land? No; let us insist upon higher literary attainments in our students; impress it upon the public mind continually and in every way, that more preliminary training is necessary; but let us not adopt anything which we should be obliged to abandon in a year. Let us not attempt the impracticable "direct means," but trust to those which, though "indirect in their application," will be far more efficacious in the end.

Dr. Hooker evidently has no very high opinion of lectures as a method of imparting medical instruction; he thinks they induce a listless, passive habit of mind. These are his words on this subject:

> The mode of study during eight months of the year ordinarily invites to a listless and careless state of mind, and in the four remaining months the students mind is subjected to such a crowd and pressure of instruction that its powers are wearied out and almost paralyzed. The memory is taxed to the utmost, and there is little time for the exercise of the reflecting and reasoning powers. Such a mass of ill-digested knowledge, of course, in a short time produces satiety, and unfits the mind for anything like active exertion. Even if the student has, during the previous months spent in his preceptor's office, pursued his studies vigorously and systematically, his habits are entirely broken up by this passive and confused reception of such amounts of instruction; and, as he has little time to engage in that critical examination of subjects to which he has accustomed himself, he soon loses the habit of doing so, and loses with it some of that mental vigor which can be preserved and increased only by active exercise.

Now, we had supposed that, as to several branches of medicine, memory was the principal faculty in demand; and as to the others, students, we apprehend, are likely to

have quite a sufficient diversity of views presented in most schools, to put in requisition all their "reflecting and reasoning powers." It is not easy to understand how they can become the passive recipients of doctrines as wide apart as the poles. Our own conviction is, that the minds of students are nowhere more vigorously or profitably exercised than in the lecture-room. But upon the principle assumed, the committee are opposed to the extension of the lecture-term. They would favor the extension if, instead of giving lectures, the professors would occupy the added time in examining their students. We incline to the belief, though we have advocated the extension, that the lecture term will continue in most schools, for a good while at least, of its present length. Still, we are in favor of a *five* months' term.

The committee seem to think that much might be done by examinations to excite in a medical class a spirit of emulation, and since these are so much neglected, they do not deem it strange "that listlessness and inattention mark so strongly the majority of the audiences in the lecture-room."

We suspect the committee have been unfortunate in their observations. It is not our experience that such "listlessness and inattention" are characteristic of lecture-rooms. On the contrary, me lical students have appeared to us to be the best listeners in the world. We have never seen audiences, under regular didactic discourses, give better attention than has been habitual in the lecture-rooms where we have happened to be. The fault is not that students lack incentives, or that they are careless listeners, but that the period through which they keep up this close application is too short. They have inducements enough to study, and study hard enough till they obtain their diplomas; but unfortunately at that point, with too many of them, study ceases.

There may be a good deal in the following suggestions.

We believe there is; but then they are clearly impracticable. Nothing in the premises can be done directly, but much may result from discussion. The committee are remarking upon the prevalent mode of examination for the medical degree, and go on to say—

Still another difficulty presents itself in attempting a reformation of existing abuses. The schools are, most of them, under the control of corporations which are not in the least degree responsible to the medical profession. They are all independent bodies, and they pursue of course to a great extent, their separate and individual interests. No uniform plan or measure can be adopted, therefore, except by common consent. This we deem to be a radical error in the organization of the medical schools in this country. They should be under the watch and care of the profession. *They should be its property.* They should be among its appliances for securing to the community a body of well educated physicians, and should therefore be, to some extent at least, under its control. The teachers in these schools should be placed there by the profession, and not by corporations that are incapable of judging of their qualifications. Such places of honor and trust should be in the gift of the profession, and should not be at the beck of popular favor. And no school should be established except when the necessity for its existence has been decided upon by the profession.

Exactly in what way a change shall be made which will effect all this we will not prescribe. We propose the whole subject to the consideration of the association, and of the profession; and would only suggest that perhaps the best way to secure so desirable an object would be to have each school responsible to the medical society of the state in which it is located. The State Society also might decide as to the necessity for any new school whenever it should be proposed. And all vacant professorships should be filled by the profession, and one of the means of choice should be something similar to the French Concours. An end should be put to the getting up of schools to gratify private ambition, and to the bestowment of professorships by favoritism, or upon principles of bargain and sale for

a certain amount of pecuniary risk in the enterprise. The temple of our science ought not thus to be made a house of merchandise.

The committee continue:

As the result of the lax mode of procedure which marks the system of medical education in this country, the ranks of the profession are everywhere crowded. Statistics show this to be so. For example, in the city of New York, as stated by Dr. Stewart, in the report of 1849, there is one physician to every 500 persons. Deducting the one fourth of these, who are attended gratuitously in one way and another, it leaves but 375 persons to each physician, and a portion of these employ empirics, or take quack medicines.

But the profession is not only crowded, but a large proportion of it is made up of unworthy and ignorant men. So easy is it to obtain a diploma that mere adventurers in great numbers enter the halls of medical science, choosing medicine as a trade, and not as an honorable profession. Such are eager to finish their course of study in the shortest possible time, and are ready, when they have done so, to cope with the most diligent and accomplished of their compeers and the strife for the popular favor and patronage, having received the same honorable badge with them, and perhaps at the same institution. And even quacks, while engaged in the practice of quackery, have been known to receive diplomas from institutions whose representatives appear as delegates in this body.

The only way in which this enormous and motley influx into our profession can be prevented in future is by making a rigid course of training absolutely necessary to the attainment of a degree in all the schools in this country. And in this connection we remark that the objection which is made to a proposed reduction of lecture fees, thatit will promote this influx, is in our view groundless. No pecuniary restrictions will be adequate to prevent the evil; but our reliance must be placed upon the strictness of the training to which the student should be subjected, and to the thoroughness of the tests which should be applied to decide upon his fitness for the responsible duties of the physician.

In the last words of this quotation we have the remedy expressed, and the only remedy for the evil within our reach—it is, at last, "*the thoroughness of the tests*, applied" to the applicants for the doctorate. The schools and boards of examination have the remedy in their hands, and they must apply it. It is not in the power of the profession to prevent the multiplication of medical schools, whether established "to gratify private ambition," or for any other purpose; but the public sentiment of the profession tends continually to restrain the schools when established, and must gradually raise the standard of qualification in their graduates. Like individuals, they are amenable to public opinion, and no institution, it may be safely said, can long stand ground against the deliberate judgment of the profession. On all sides it is admitted, that the tests now applied are not rigid enough. The schools must come up to the requisitions of the profession, and we have not a doubt that they are approaching to the standard.

There is matter for reflection in the facts contained in the following extract. It is an undeniable truth, that the mass of the educated talent of our country takes other directions than medicine, especially in the New England States. It is not so much the case in Virginia and the Southern States generally. But everywhere the impression has been too prevalent, that while lawyers and preachers must be men of finished education, if not of bright parts, a doctor could be made out of almost any sort of materials. And it has turned out that though, among medical men, there have been in every generation those the most renowned for learning, there has also been a sad want of scholarship in the profession. Learning, in reality, is not so necessary in medicine as it is in law or theology. A man can not be an eminent lawyer or divine without learning. He can be a very eminent surgeon or physician without it. In the former professions it is indispensable; in medicine

it is not. And since it is possible to dispense with it and be respectable, it is too generally dispensed with. Dr. Hooker has been at the pains to collect some statistics on this subject, which are here given:

There is one fact, to which we will call your attention in this connection, that merits the most serious consideration. We refer to the fact that very little of the educated talent of this country finds its way into the medical profession. This we have verified by statistics. But a small proportion of the graduates of our literary institutions, we find, enter the medical profession, in comparison with those who enter the professions of law and divinity. The statistics upon which this statement is based we have gathered from eight colleges in different parts of our country, viz: Harvard, Yale, Dartmouth, Brown, Princeton, Union, Amherst, and Hamilton colleges. In no case have we gone farther back than the year 1800, because there were very few medical schools in existence before that period. We have taken the triennial catalogues of these eight colleges, and, beginning with the first year of the present century, have extended our calculations over a space of about forty-five years. Our statistics include 12,400 graduates. Of these 934, that is, only one in thirteen and a quarter, have become physicians; while 3,211, that is, one in three and four-fifths, have entered the clerical profession. The exact number of those who have chosen the profession of law we are not able to ascertain, because they are not distinguished by any mark from the other graduates; but we are satisfied, from the facts which we have been able to gather on this point, that the proportion is quite as great as that of those who have entered the clerical profession.*

*The differences in the results of the statistics of the several colleges, whose catalogues we have examined, are interesting, as showing the influence of various circumstances upon the choice of a profession. We subjoin these results without comment. In Harvard College 1 in 7 1-3 chose medicine, 1 in 6 5-6 chose divinity; in Yale, 1 in 14 7-10 medicine, 1 in 3 7-10 divinity; in Brown, 1 in 9½ medicine, 1 in 2¼ divinity; in Dartmouth, 1 in 18½ medicine, 1 in 3 7-10 divinity; in Princeton, 1 in 16 medicine, 1 in 6¼ divinity; in Union, 1 in 34¼ medicine, 1 in 3 4-5 divinity; in Hamilton, 1 in 16 3-5 medicine, 1 in 2 3-5 divinity; in Amhurst, 1 in 18 medicine, 1 in 2 divinity.

The reason of the fact which these statistics establish is that *talent is not so sure of its reward in the medical as it is in the other professions.* This explanation, we allow, can not apply to the clerical profession to its full extent, because higher motives than those of ambition are made very prominent in inducing men to enter that profession. But it certainly does apply most fully to the profession of law in comparison with that of medicine.

But there is another fact which at first view seems to be at variance with our explanation of the great fact developed by these statistics. We refer to the fact, of which there is abundance of proof, that the medical profession receives its full share of the *uneducated* talent of the country. If we examine, however, the bearing of this fact, we shall see that, instead of its being inconsistent with our view of the subject, it confirms its truth. While educated talent has been tested, and has ascertained its relative standing, perhaps in the palpable shape of honors, it is far otherwise with uneducated talent. Knowing not its powers, and having never received any rewards of its efforts, it is not so calculating and far-sighted on these points, and more readily follows where inclination and taste lead it. And as the door of the medical profession is widely opened, and as uneducated talent sees that it can cope with educated talent with more hope of success than it can in other fields of effort, it is attracted more largely to this than it is to the other professions.

But we have other statistics which reveal a fact confirmatory of the view which we have given of this subject. We have found that of those who have received honors in our college, the proportion that has entered the medical profession is smaller than that which has entered it from the whole body of graduates. Thus in Harvard, while one in seven and one-third of the graduates has be-

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We are aware that these statistics are not strictly correct. In making up the Triennial Catalogues, the profession which is chosen by the graduates is not in every instance ascertained. Still the omissions from this cause, we are satisfied, are not sufficient to affect materially the general result at which we have arrived. The defect is probably greater in the case of Union College than in any other, in relation to those who are designated as having chosen the medical profession.

come a physician, but one in eleven and a half of the members of the Phi Beta Kappa Society (which generally comprises the best third of each class in point of talent and acquirement) has chosen our profession. In Yale College, also, our profession was chosen by one in about fourteen and a half of all the graduates, but by only one in eighteen and a quarter of the members of the Phi Beta Kappa Society. And of 333 who took the highest honors in twenty-three classes, but one in thirty and a half became a physician—showing that the more we sift the classes in our colleges in regard to talent, the less is the proportion of those who enter the medical profession. A similar result is found in the statistics of Hamilton College. While the medical profession was chosen by one in sixteen and three-fifths of the graduates as a body, it was chosen by only one in twenty-five of those who won the honors in the several classes of that institution.

The import of the state of things developed by the above statistics is augmented by the fact that the medical profession embraces a much larger body of men than either of the other professions. Even if the number of educated men who become physicians was equal to the number of those who choose the profession of law or divinity, the proportion of educated to uneducated talent would be much less in the medical than in the other professions.

We think it must be admitted by even the most sanguine friends of reform, that the evils deplored in this extract from the report of the committee are such as are not to be speedily remedied by the action of medical associations. They are to some extent inherent in our profession—necessary evils—and not to be eradicated by any species of legislation. As long as law or any other vocation holds out greater profits or honors to the youthful aspirants, so long will those callings be preferred to medicine. But so far as these grievances are susceptible of remedy, they are not to be reached by those of a direct or radicial character; they can be corrected by nothing short of an enlightened public sentiment.

Writers on this subject, we have thought, are very prone to fall into the style of those enthusiasts often met with, who are persuaded that they are in possession of some specific remedy—some panacea—before which the ills that flesh is heir to yield at once, as the dark things of night fly away at the coming of the sun. "Only let the association give their fiat," say they, "and the work will soon be done." It is as simple and facile as the process of *Puck* in the *Midsummer Night's Dream*—"the man shall have his mare again and all shall be well." We have said that we rest many hopes upon the association, and look to it for important results, but we confess our faith does not extend so far as this. Its influence is eminently benign, and will continue to be felt more widely and beneficially, but its "fiats," we suspect, will not amount to much. It is a congress, indeed, but without any power to make laws. It may legislate much, but its legislation is not binding, further than as it embodies public opinion. The public opinion of the profession is omnipotent.

But a profound writer remarked a good while ago, that "one of the hardest things in the world to get at, is the truth." It is not an easy matter to gather the public opinion. The Association is already complained of for not reflecting it fairly, and the object of Dr. Jackson's pamphlet, the title of which we have placed at the head of this article, is to bring about its reorganization. Dr. Jackson proposes that the officers of all public institutions, as such, shall be excluded from the association, and the delegation be made up entirely of the members of county societies; and this, we suppose, was discussed, along with many kindred projects, at the last meeting. We do not propose to discuss it here, but we can not help remarking, that it is another symptom of that restlessness which so extensively pervades the profession; that striving after something better; that desire of innovation and change. This spirit must be watched, or it will add another to the multitudinous

evils of which we now complain. The association is in constant danger of acquiring a political cast—of becoming a great primary assembly for the discussion of medical politics. In the estimation of some members the last meeting was rendered less profitable and interesting by the prevalence of this spirit, in which the higher interests of science seemed for the time to be somewhat overlooked. Medical politics must continue to be a leading object with the association, but they ought to be restrained within reasonable bounds. They ought not to be allowed to swallow up every thing else. Let Dr. Jackson's amendment be canvassed; let all the other medical politicians bring their amendments in; let us have the widest possible range of discussion, the utmost freedom of opinion and speech. *E collisione scintilla.* Light will come of the collision. Many favorite projects, many wise schemes, must fare badly, but the profession will be advanced and benefited.

Art. VII.—*Anesthetics.* Medical Examiner for May 1852.

British and Foreign Medico-Chirurgical Review, for January, 1852.

At a meeting of the Philadelphia County Medical Society, held on the 13th of April, an interesting discussion took place on the merits of anesthetics, and as the subject is one upon which the minds of professional men are still far from being accordant, we propose transferring to our pages some of the testimony for and against these remarkable agents brought out on that occasion; and if our limits permit, we shall take a more general survey of the state of public opinion in reference to anesthesia. If not, we may return to the subject at an early day. Dr. Patterson, one of the members, who had lately returned

from Europe, was requested to give the society the result of his observation on the use of ether and chloroform; upon which he replied that :

He had until recently felt, as the great body of the profession in Philadelphia feel, in regard to the anesthetics. His position had been that of doubt, of distrust, and avoidance of them as a dangerous innovation. These agents came to us in a very questionable shape originally. When the first report of anesthesia in surgery reached us from Boston, it came, not only startling us by its novelty and the magnitude of the change in practice it contemplated, but also shocking us by its violation of our ethical notions and the savor of empiricism that hung about it. The new agent had a new, high-sounding and unscientific name, and there were rumors of a patent-right to be secured to its discoverers. But when it was shown to be plain sulphuric ether, which any chemist could manufacture and any practitioner administer—when the name of Letheon disappeared, and the letters-patent were no longer heard of—especially when indisputable evidence of its power and utility reached us, we should have given the subject a more favorable reception and examination than we have done. But the mass of resistance to the use of anesthetics has been more obstinate and impregnable here than any where else in Christendom; and our hospital—alone among great hospitals—has never permitted their employment even in the most painful operations. Participating in these feelings, and never having administered either chloroform or ether in his practice, Dr. P. visited Europe during the past summer, and one of the objects he proposed to himself was to obtain, if possible, more light upon this much mooted question.

In Edinburgh he had the opportunity of seeing and hearing a great deal of the use of chloroform, and it was in regard to the experience of that city that he desired mainly to speak. The undeniable and most important fact is, that in Edinburgh, where chloroform has been used with a degree of freedom, and with a frequency and extent elsewhere unknown, not a single unpleasant circumstance has attended its administration. Every obstetrician, surgeon and dentist in that capital uses it, without exception. Every teacher of obstetrics advises its

employment, and gives it to his patients in labor, some in all cases and others only in cases of unusual duration and severity. No surgeon thinks of performing a serious or painful operation, one likely to be attended with great suffering or severe shock, without bringing his patient under its influence. Thousands of patients have inhaled it to full anesthesia; the chemists manufacture and sell it daily in large quantities; and no one has been injured or even made ill by it. There does not remain a practitioner in Edinburgh opposed to its use. An infinite amount of pain has been relieved, great suffering has been prevented, the dread of the operation has been in a great measure removed, and no harm has been done to a single individual. There is no denying these facts. There can be no supposition of concealment or unfair dealing. The character of the gentlemen in whose hands its employment is, of itself precludes the idea as one not to be entertained for a moment. In a large proportion of the cases, if not in all, concealment would be impossible were it attempted. Dr.S impson introduced the chloroform to our notice as a therapeutic agent, he bears the unqualified testimony that he has never seen it do any mischief whatever to his patients. Dr. S. is a man whose word, in a matter of medical experience, must be taken without qualification. He has not only the candor of an honest man, but also the discriminating judgment which is not readily deceived, and the calm deliberateness which is not easily led away by the enthusiasm of a hobby. By his kindness Dr. P. was enabled to witness the administration of chloroform to several patients, and to converse with others who had used it in child-birth, some for a considerable length of time. In some cases Dr. P. has maintained its effects for several hours. This powerful agent was always administered with due caution, but with a fearless hand. The patient was thrown into a condition of perfect insensibility, and underwent operations otherwise painful, without any apparent sensation, and certainly with no subsequent recollection of suffering. The manner of Dr. S. indicates the most entire confidence in both the safety and utility of his practice. The lying-in women whom Dr. S. saw were all in excellent health and spirits, and Dr. P. thought that their average "getting up" was shorter and better after chloroform than without it. All asserted that they awoke

from the slumber without the slightest after-sensation or recollection of pain, without headache or vertigo or nausea, and precisely as after a refreshing sleep. One spirited and intelligent lady, with whom Dr. P. had the honor to converse, roundly asserted that the ladies of Edinburgh *would* have chloroform whether their doctors gave it to them or not; that she would not approach her confinement without it, and that the knowledge that this invaluable boon was within her reach, had taken away all the trembling apprehension which had previously made her pregnancy a period of dread and suffering.

In other parts of Great Britain and on the continent, the anesthetics are not used so freely as in Edinburgh, but still they are resorted to in all severe surgical operations, and very frequently in obstetric practice. There are very few who use them in every case of midwifery to which they are called, but there are still fewer who do not use them in some cases. No surgeon of any note refuses their employment altogether. They are used in every hospital of London and Paris, more or less. Dr. P. was amused by the ardor of a gentleman connected with St. Bartholomew's, who, in a conversation on the subject, enthusiastically declared that all the other benefits conferred on mankind by the discovery of America, (bark and our democratic liberty included,) were eclipsed by the inestimable addition of anesthetics to the treasury of the healing art.

The substance used exclusively in Edinburgh, and most generally elsewhere, is chloroform. The accounts we have of unpleasant or fatal effects from it, do not deter them from administering it. Dr. P. saw no sulphuric ether given, and met with no physician who employed it. The objections to its use are its highly stimulating qualities, (increasing the risk of fever and hemorrhage,) its unpleasant and exceedingly persistent odor, and its liability to leave a disturbed condition of the stomach with gastric uneasiness and acid eructations. The question of danger from chloroform he would not discuss at present, except to express his conviction that it is ascribable, in all cases, to some error in the method of administration or in the management of the patient or of the inhaling apparatus. Dr. Simpson gives it on a napkin or handkerchief, lightly folded in a funnel shape and held near the mouth. In obstetrical cases he gives it on the approach

of each pain, removing the napkin the moment the relaxation of the patient's muscles shows that the pain is passing off, and not reapplying it until her uneasy motions indicate the approach of another pain and that it is beginning to be felt.

In view of all these circumstances, Dr. P. inquired whether there is not reason to believe that we in Philadelphia have been a little unreasonable in our opposition to these agents. Certain it is, that they alleviate much suffering for which we have hitherto had no remedy, and that they have in a measure taken away the curse of child-birth, and deprived surgical operations of much of their horror.

Dr. Condie, in the following extract, embodies the whole force of the argument against anesthetics.

Dr. Condie was inclined to believe, that a very considerable change, in the opinion of European practitioners as to the employment of anesthetics, had recently taken place. That a much greater degree of caution in their administration was now inculcated, and that the circumstances under which a resort to them solely to prevent pain, is proper, are admitted to be much more restricted than was the case upon their first introduction. This he inferred, from the very different tone assumed, of late, by the medical journals of Europe when treating of anesthetics and of the cases in which their administration is justifiable. Much of the wild enthusiasm by which the propriety of a resort to them, in almost every case attended with pain or suffering, was insisted upon by their early advocates, have disappeared. It is now admitted, on all hands, that the leading anesthetic (chloroform) is an active poison, and that to prevent disastrous consequences following its administration, the utmost caution must be observed; that we are not always able to determine the effects that may be produced, in different individuals, by the inhalation of the same quantity of the article, that the induction of anesthesia is not justifiable in trifling operations, or in ordinary cases of perfectly natural labor; that, even in those cases in which anesthesia is considered proper during parturition, it is unnecessary to push it to the extent

of inducing an entire abolition of consciousness; and finally, that there are a number of circumstances the presence of which forbids absolutely, in all cases, a resort to it.

Anesthetics have been in use for too short a period to enable us to arrive at any very certain conclusions in regard to their real value as therapeutic agents—to determine accurately all the cases and circumstances to which they are adapted, or to lay down the proper rules for their safe administration. It unfortunately happens that, whenever any important remedy is announced, instead of a dispassionate examination of its properties, and a cautious testing of its curative powers, it is at once seized upon by a set of enthusiasts, who laud it far beyond its deserts, and ascribe to it remedial virtues under circumstances where it is afterwards ascertained to be powerless for good, if its effects be not even positively injurious; and if the agent be one of great activity, it is only after the infliction of much injury from its injudicious employment, that it attains its proper place upon the lists of the materia medica. When iodine was introduced as a remedy, to believe those who first described its properties and therapeutic powers, it was to remove, at once, consumption from the list of incurable diseases, and to arrest all scrofulous affections, with as much certainty as the bark or quinine is known to arrest the paroxysms of intermittent fever.

But, in reference to no remedial agent, has this wild enthusiasm been displayed to as great an extent perhaps, as it has in regard to anesthetics. By their agency pain was to be expunged from the catalogue of human evils—child-bearing was to be divested of its agony, and the knife of the surgeon was to remove the diseased member from the body without the patient suffering a single pang, and this without the slightest danger or inconvenience either immediate or remote.

No wonder need be experienced that anesthesia should have secured from the very first so many ardent advocates, that it should have been recklessly resorted to in almost every operation, in every case of labor, and in almost every disease attended with pain or acute suffering of any kind. Nor has, as yet, the occurrence of death after death, directly attributable to the influence of the

agents employed in in its production, been a sufficient warning to deter all from a resort to these, merely for the prevention or relief of pain.

By the physician, pain is to be studied with very different feeling from those prompted by a morbid sensibility. Its removal may not, under all circumstances, be advisable. Though invariably an evil, still, cases may certainly occur, in which it would be better to allow the patient to endure, for a short period, even severe suffering, than to induce in him a state of complete insensibility. It was the opinion of Dr. Physick, that, generally speaking, important operations are more successful in those patients who give full vent to their feelings, than in those, who, by a powerful effort of the will, suppress all indications of suffering. And there is some foundation for the inquiry whether, even admitting that, by the employment of anesthetics, surgical operations may be divested of pain without any immediate danger to the life of the patient, the ultimate result of such operations is as favorable, upon the whole, as of those in which anesthesia has not been induced.

A comparison that has been made by an acute and accurate observer, in our midst—based on the statistics of several large hospitals—of the results of operations in the same institution, before and after the introduction of anesthetics, as well as the results of operations performed in those hospitals where anesthetics are now invariably employed, with that of the same class of operations performed in the Pennsylvania Hospital, without the induction of anesthesia, would lead us to suspect that the abolition of pain by anesthetic agents does actually exert an unfavorable influence upon the result of operations; an opinion at which Dr. Porter of the U. S. army had arrived from his experience of the use of these agents, during the war with Mexico.

In obstetrics, Dr. Ramsbotham, in the last edition of his *Obstetric Medicine and Surgery*, has denounced the employment of anesthetics, excepting in some few exceptional cases; while Dr. Chowne, in a late discussion before the London Medical Society, remarked, that he had seen most disastrous consequences follow the administration of chloroform—not only simple after-consequences,

but serious mental disorders. The fact of the occurrence of insanity from the use of chloroform is insisted upon by Dr. Webster, who has adduced several cases in which such a result occurred; his statements are of a character that forbid our treating them with entire indifference.

But even if we could, with positive and invariable safety, prevent the pains of parturition by the employment of anesthetics—would it always be proper to do so? There may be some practitioners of such consummate skill in the application of obstetrical instruments, who, directed solely by their knowledge of the anatomy of the pelvis, and the position of the head, can apply them, without any risk of injury to the organs of the female, as well while she is in a state of entire unconsciousness as when she is in a condition to advise him, promptly, of any pain he may inflict upon her. Dr. Condie, however, very freely confessed that he preferred always, in the application of instruments during labor, that the susceptibility of the female to painful impressions should be unimpaired, as an additional safeguard to prevent her suffering injury from maladroitness on his part.

Much surprise has been expressed by Dr. Parrish, that the comparatively few cases in which fatal effects have resulted from the employment of anesthetics should be used as an argument against a resort to them in surgical operations and during labor, when the same objection will equally lie against the administration of any of the more potent and useful articles of the materia medica. But is it not far more surprising that the gentleman should not see the very material difference between the employment of a dangerous remedy to *save life*, and a resort to a similar remedy *merely to destroy pain*, in a case that we have every reason to believe, so far as the safety of the patient is concerned, will do very well without it? It will not do to point to the 9000 operations safely performed at St. Bartholomew's Hospital under the influence of anesthetics, in evidence of the propriety of resorting to it, as a mere preventive of pain—for the one single case of death acknowledged to have occurred in that institution from the use of anesthesia, independently of others of which we have been informed, is sufficient to counterbalance all the good supposed to have resulted from it, by the mere abolition of pain, in the 9000 cases. The life of one patient

in 10,000 ought not to be sacrificed to obtain for the remaining 9999, relief from what is, in fact, in most cases, a very short period of suffering.

Dr. C. remarked, that he did not wish to be considered as altogether opposed to the employment of anesthetics as therapeutic agents. He was satisfied that their introduction had armed us with a most potent and valuable means of relief in a numerous class of cases. From their internal use, by inhalation, as well as from their application externally, he has derived the most beneficial results in many instances: he has seen them arrest, immediately, the most violent paroxysms of puerperal convulsions, allay promptly the intense suffering induced by cramp of the stomach and intestines, and that the attendant upon neuralgic affections of the internal organs, and of various portions of the surface. He could even conceive of operations in which the risk of danger from their employment should not deter us from availing ourselves of their pain-abolishing effects. An operation may be necessary to save life, but one, at the same time, attended with so much and so long continued suffering, as to cause the patient to hesitate between its endurance and the *certainty of death* should it be omitted or delayed. In such a case, Dr. C. would not hesitate to recommend the induction of anesthesia—believing that the risk the patient will incur from it will be fully compensated by its enabling him to undergo an operation, the pain of which it would, otherwise, be scarcely worth enduring to purchase the few additional years of existence it may possibly bestow. Cases too occur, not necessarily fatal, of violent paroxysms of pain, occurring periodically, at shorter or longer intervals, and during a very long period of time, where relief from suffering, by which life is rendered a burden, is cheaply purchased by any remedy, even one, the exhibition of which may be attended with considerable danger. Such cases, are, unquestionably, proper ones for the employment of anesthetics; under many other circumstances also, they will no doubt be found useful and judicious remedies—even although no other good effect should attend their exhibition than the relief of pain.

In reply to Dr. Condie, Dr. Parrish brought forward

other statistics. In a word, we think he completely answers Dr. Condie's objections:

Dr. Parrish remarked that he was surprised to find the statistics of Hospitals introduced here as opposed to anesthesia in large surgical operations. The basis of the calculation, as I understand it, is a comparison between the results of amputations in the hospitals of New York and Boston, since the introduction of anesthetic agents into these institutions, and those of the Pennsylvania Hospital, where they are not used. Dr. Condie, who generally speaks with such accuracy, on questions when facts are concerned, has not brought forward the figures by which he claims to sustain his position, but has made a general statement that a comparison between these institutions is altogether unfavorable to the use of anesthetics.

Now, will any one undertake to say that a slight difference in the percentage of mortality, after operations of any given class, running through a period of only a few years, and without taking into account all the attending circumstances, the comparison being made between three institutions, and those not of the largest class, is to be taken as evidence against the use of an article, which has been employed thousands of times in the largest hospital establishments in the world?

Why, it is well known that the statistics of a hospital bearing upon any point, may vary very much from year to year, and that a series of unfortunate results in one or two years will influence very materially the general results for a series of years. Thus an epidemic erysipelas may prevail, and carry off a large number of patients who have been subjected to capital operations; and if the institution should be visited with such an epidemic for several seasons in succession, the mortality may become so heavy, as to keep it in the rear of the more favored institutions for a long series of years. There are, too, various other circumstances which may influence the mortality, entirely independent of the use of anesthetics, and which in my judgment would render it very unsafe to draw conclusions, based upon the experience of two or three institutions during a period of a few years. I apprehend, also, that a difference will be found in the percentage of

mortality after any given capital operation, during a series of years, amongst the best hospitals of this and other countries, both before and since the introduction of anesthetic agents, showing that other causes are constantly varying the results.

But if a difference in the mortality of hospitals prior to, and since the introduction of anesthetic agents, is to be taken as an argument for or against them, we have a much more extended field of comparison than that offered by the three chief hospitals of this country.

The large hospitals of Europe furnish much more reliable data; and it so happens that the advocates of anesthesia point triumphantly to the statistics of these institutions as affording ample evidence of a diminished mortality after the great capital operations, since the introduction of these pain-destroying agents.

In the elaborate work of Professor Simpson, on anesthesia in Surgery and Midwifery, the reader will find two chapters devoted to the question, whether anesthesia increases or decreases the mortality attendant on surgical operations. The author has here collected the statistics of mortality after the large amputations, in different countries, as derived from official sources, including Phillips' table, which comprise not only the results in hospital practice, but in the private practice of physicians in Great Britain and in other countries, so far as recorded in the periodical literature of these countries. He has also availed himself of Malgaigne's tables of results from the Parisian hospitals, forming altogether one of the most complete and extensive collections of cases yet published. The percentage of mortality after large amputations, calculated from these data, which were formed prior to the introduction of anesthetic agents, are then compared with the results after the same operations with anesthetics, as derived from the British and Parisian hospitals, forming a series of upwards of 300 cases, up to the time when Professor Simpson wrote.

The conclusion arrived at is, that the mortality since the introduction of anesthesia is sensibly diminished, and the argument in favor of anesthetics thus derived is considered by Dr. Simpson as most cogent and convincing. I can only refer the members to this array of figures on

the ether side of the question, and ask them to compare them with those now brought forward on the other side, and see which is the stronger.

I believe myself that there is some degree of uncertainty in this method of calculation, but if it is relied on, etherization has evidently the advantage.

In regard to the recent unfortunate death from chloroform at St. Bartholomew's hospital—it is certainly against it—though it is only one death in over nine thousand cases, in which the article has been administered there; still, this with the others which have been reported, shows that chloroform is a most potent agent, and that it should not be given on trivial occasions, and without great caution, while at the same time one death in ten thousand should not cause us to abandon it. I myself have always preferred the ether, believing it to be safe and reliable, and should not use the more powerful agent, where this answered the purpose.

Dr. Hays referred to the cases of death from anesthetics, which he said amount now to more than thirty, and remarked that he deemed the possibility of such an accident a sufficient reason why professional men should still exercise caution in the use of these agents. A fatal case has lately happened in St. Bartholomew's Hospital, London, where, up to that time chloroform had been used in nine or ten thousand instances without "a stain on its character as an innocuous agent of good." The history of this case is related in the *Examiner*, to which we are indebted for a report of this discussion, and as in some particulars it is one of much interest, we append it for the benefit of readers who may be forming their opinions on this subject. Dr. Hays thus gives it:

The subject of this case, was a young man only 23 years of age, affected with aneurism by anastomosis implicating the ear and a portion of the scalp behind it, and which had commenced when the patient was four years of age. He was admitted into St. Bartholomew's Hospital,

and Mr. Lloyd determined to attempt its cure by ligating the vessels supplying it. Chloroform was given to the patient, and he was kept under its influence for half an hour, the operation having proved a tedious one. He recovered from its influence without any ill effects. The tumor was not, however, entirely obliterated. A little over a month subsequent to this operation, Mr. Lloyd found on examination an artery between the angle of the jaw and mastoid process which pulsated strongly, and on compressing it so as to arrest the circulation in it, the pulsation in the tumor entirely ceased. Mr. Lloyd determined to apply a ligature to it. Chloroform was again administered by the careful and experienced assistants of the hospital, and the article used was from the same bottle which had been administered in the previous operation. In from five to ten minutes he came under the influence of the article, and Mr. Lloyd commenced the operation. Scarcely had he incised the skin when his assistant informed him, that the patient's pulse was sinking, and before any restoratives could be applied, he ceased to breathe. Every means that could be devised were resorted to in order to re-animate him, but without success. On post-mortem examination, no morbid organic change in any organ was found to explain the fatal occurrence; but the blood appeared to have been poisoned. "It was fluid, and it remained without coagulation after its escape from the heart and vessels. It had also a brownish purple hue, much like that which is commonly observed in the spleen; none of it, when thinly spread out, presented the ordinary dark, black or crimson hue of venous blood." But for this untoward administration of chloroform, the patient might have lived to the usual term of human existence. Here, then, is a case in which no human foresight could have provided against the fatal result. The chloroform used was pure, and had been employed before without any ill effects; there was no idiosyncrasy in the patient forbiding its employment, for he had previously been under its influence with apparent impunity; that there was no want of caution and skill in its administration, we have the assurance in the fact that it was given by the experienced assistants of the Hospital; and that there was no organic disease forbiding its employment,

was demonstrated by the autopsy. If this case is not calculated to prove that danger attended the administration of chloroform, Dr. Hays said he would be at a loss to know what kind of evidence gentlemen required for that purpose.

By far the most important event of the 19th century connected with medicine, unquestionably, is the practical use of anesthetics. Whatever may be the estimate of their value, no one can doubt that they have wrought great changes in the practice of the healing art. That they are a boon of inestimable value we have long been thoroughly convinced; but at the same time it would be folly to attempt to disguise the fact, that it has come to us not unmixed with evil. Anesthesia is not unattended with danger. The victims to it might possibly, now, be counted by scores. Certainly more than thirty have perished by etherization. But amid these disasters public confidence in the safety of the practice has been steadily increasing. The wonder experienced is, that so few have been killed by agents capable of exerting so powerful an influence upon the human system. No doubt they are used more cautiously for these accidents, but it can not be doubted by any one that their use is rapidly extending.

But we have no room for remarks of our own, and will only add that we regard the reputation of anesthesia as fixed and secure. If professional men were now disposed to give the practice up, they would not be permitted to do so by their patients. Anesthetics, we may be sure of that, "will never down."

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

Observations upon the Inutility of the Abdominal Bandage after Parturition, being part of a lecture delivered this session. By F. C. T. Arnoldi, M. D., Lecturer upon Midwifery, St. Lawrence School of Medicine, Montreal, &c., &c.—Having now told you all the essential points to be rigidly attended to during the process of labor, you must be made as familiarly acquainted with the nursing part of the puerperal state. The child having been disconnected from the mother and the placenta withdrawn, your next care should be, that the uterus has assumed a state of permanent contraction, and for this purpose, you should diligently watch, for at least half an hour, because, very alarming symptoms may supervene, such as uterine hemorrhage, syncope, or convulsions. The most common is uterine hemorrhage. This may take place under various circumstances, but the most ordinary, is an atonic state of the uterus, the cause of this condition may either be immediate or remote, that is to say, immediately after delivery, the uterus may cease to contract, or having, to all appearances, permanently contracted, it may relax, get into the atonic condition, and so give rise to profuse hemorrhagic discharge. Now this discharge, in both instances, is owing to the *baillant* condition of the uterine venous sinuses; fortunately, however, this is not an every

day occurrence, yet apparently, with a view of anticipating such a serious misfortune, our ancestors and modern authors lay down strict injunctions for the application of an abdominal roller or bandage. There was a time, when I would have thought it almost sacrilegious to have acted in contravention to this precept—but a case happened to come under my charge, in which I was very much interested, and which gave rise to close anatomical investigation on my part. I shall narrate it to you in a familiar manner, and show you the conclusions I came to:

Mrs. A. was confined on the 14th August, 1830. Being a prima para, it was, as usual, a painful and somewhat tedious case, but on the whole nothing uncommon, the secretion of milk set in within fifty-four hours, and nothing appeared to indicate the prohibition to her sitting up in an arm chair on the fourth day, for the purpose of having her bed made; the bandage had been applied round the abdomen according to orthodox rules. On the evening of the fourth day, she complained bitterly of pains in her loins, and continual bearing down pains—supposing that the bandage had not been applied sufficiently tight, it was drawn a little tighter, but instead of affording any relief, the pains were increased. It then struck me, that as the bowels were in good order, the bandage was the whole and sole cause of the evil, and, to satisfy myself, I examined a skeleton very attentively, and I came to the conclusion that my notion was correct; in proof, gentlemen, only look at this skeleton, and observe (that which I was so careful to impress on your minds in the former part of my course) the very obtuse angle, the brim of the pelvis bears to the axis of the spinal column. You see, that the promontory of the sacrum is several inches above the horizontal line of the pubis—that the promontory projects forwards—the sacrum recedes, and thereby forms a recipient cavity. Again, gentlemen, remark the lateral configuration of the skeleton, and you perceive that the great projecting alæ ilii, the crests of which are on a line almost parallel with the promontory of the sacrum, form the point from which the tapering figure starts upwards towards what is called the waist; this you see is perfectly demonstrable even on the skeleton, how much more so is it as you must have observed, on the soft subject? Well, having satisfied myself on these two points, I first of all came

to the conclusion that no well-formed woman could keep an abdominal bandage in its proper place, unless, indeed, it were very tightly put on, and then I inferred that if very tightly put on, it must act very detrimentally on the yet heavy uterus. The bandage you see, to keep its place, so as to act upon the uterus, must be applied over the hip, otherwise, it must act upon the abdominal viscera, and make them press down upon the uterus, in which case the bandage necessarily slips up to the small diameter of the waist, and can no longer carry out the original object intended, and proves a sore annoyance to your patient, who, believing there is some charm in it, keeps herself in a constant fidget by pulling it down, and pulling it, as she believes, into the right place; now, this of itself, gives rise to much unnecessary muscular exertion. If the bandage be kept tight over the hips, it must necessarily act upon the uterus, and that, in two ways, presuming it in the first place to be necessary, it must be for the purpose of exciting the uterus to contraction, or it must be for the purpose of arresting uterine hemorrhage, but I maintain that it can produce neither the one nor the other effect; in the first place: it mechanically presses the yet heavy uterus into the bottom of the sacrum (which affords it every facility to descend,) and thereby lays the first seeds for prolapsus uteri, and in the second place, if uterine hemorrhage do supervene, it is one of the most fallacious resosts you can trust to; but further, I will tell you when I come upon that subject. To come back to my case, Mrs. A., as I told you before, suffered much from bearing down pains on the fourth day, and I may now add, she continued to do so for many months after; time rolled on and still the pains continued, until fortunately she again got in the family way, but even then, and for the four first months, she was constantly threatened with a miscarriage. She, however, had the good luck to go on to her full time. I delivered her the second time, and determined not to use the bandage again, in lieu of which, as a matter of precaution, I exacted a little more bed rest. My orders were strictly attended to, and her recovery was all that could be wished for. From that day to this, she has had no recurrence of bearing down pains after her confinements, though similarly treated, notwithstanding her having had ten more children, making twelve in all. Since

my experience in this case, which was in 1832, (her second confinement,) I have never applied the abdominal bandage in my private or hospital practice, I have never met with any sinister results from its omission, and I know of other medical men who have often followed my example equally satisfactorily. Uterine hemorrhage is the great bugbear, and certainly it is a most serious concomitant, but when it does take place, I can assure you, gentlemen, your patient would be badly off, if you had nothing else to trust to but the abdominal bandage. Obesity, or the becoming (to use vulgar parlance) "pot-bellied," is the next argument against the omission of the bandage, but I can assure you, that in the whole of my practice, I can not trace one single instance to such a cause. Hear what a lady writes to me from Quebec: "Dear Doctor, I was confined on ————, and I determined on following your instructions to the letter. My physician and nurse thought I was mad, nevertheless, I maintained my point, and certainly, I have every reason to be grateful to you, for besides having made a much more favorable recovery than usual, I have been relieved of that horrible annoyance—*the belly band; and the bearing down pains have not returned.*"

Again, gentlemen, let us look at the puerperal state in a strictly pathological and physiological point of view. Is not parturition strictly and simply a natural and healthy process? Certainly it is, except under casual circumstances. Can the distension of the abdomen from utero-gestation be compared with the abdominal distension from ascites? No! In the one instance, you have a healthy tonic, in the other, you have one of the worst forms of unhealthy atonic action; in the one you have a fixed duration, at the end of which tonic muscular contraction sets in, and the abdominal parietes resume their normal condition; in the other, the letting out of the fluid by the trocar is followed by a mere collapse of the abdominal parietes, so that the capacity of the abdomen would still remain the same, unless a roller bandage were applied. Were I now speaking of uterine hemorrhage, I would point out to you, how thoroughly insufficient the abdominal bandage alone would be; at any rate, I would show you how much you would be mistaken, if, under such circumstances, you trusted to it, as your main stay. Talking of uterine hemorrhage, it is a very singular fact, that

during a practice of 25 years, I have never met with more than one case, except such as I have seen in consultation, and of that case I was forewarned, as my patient had suffered from it on three former occasions. Notwithstanding, gentlemen, what I have told you as the result of my own practice, I must warn you against being too dogmatic in the course of yours Old women must have their way, and their ways are almost always based upon prejudice, you therefore should be prepared and willing to consent to their notions. If you perceive a very especial desire for the application of the abdominal bandage, my advice to you is, by all means, to consent to it; it is only necessary for you to see that it is not put on so tight as to endanger your patient to future uterine inconveniency.

Canada Journal.

Five Calculi Removed by Lithotomy, each containg a Field Bean as a Nucleus.—The following remarkable case is related by Dr. Mackenzie:—A laborer, aged 46, was admitted into the Edinburgh Infirmary with the usual symptoms of stone. On sounding, the presence of more than one calculus was ascertained. The lateral operation was performed on the 13th of October, and five stones were removed. The prismatic shape and uniform size of these were remarkable; but the presence of a foreign body as a nucleus was not suspected until the stones had been dried by evaporation, when a hard substance was heard to rattle loosely within them. On making sections of these calculi, the nuclei were found to be horse-beans. The calculous incrustations consisted of the triple phosphates.

The history of this remarkable case is as follows:—About the end of March of the present year, after a carousal with two fellow-laborers, with whom he lodged in a barn attached to his master's farm, a quarrel arose, in which he was knocked down and overpowered by his two companions. From the injuries he received, and from his state of intoxication, he was rendered senseless, and, whilst in this condition, the following cruel trick was perpetrated on him by his assailants:—

He was stripped of his clothes, and a quantity of beans

(the common field or horse-beans, used for feeding cattle) were thrust into his mouth and into the rectum; and lastly, several were introduced into his urethra. The manner in which these found their way into the bladder is unknown, but it is probable that several were introduced, one after another, into the orifice of the urethra, and then pushed back along the canal by the pressure of the fingers on the penis and perineum.

On the following morning he was found in a state of insensibility, with his genital organs covered with blood. His companions had made off, and have ever since escaped detection.

A number of beans were vomited, and passed *per anum* on the day following the assault, and during this and the subsequent day he suffered great pain in voiding his urine, which was mixed with blood, and contained several fragments of broken beans.

He was confined to bed for some days, but at the end of a week he had nearly recovered from his injuries, and his urinary symptoms had considerably abated in severity.

From that time forward, however, he continued to suffer more or less severely from the usual symptoms of stone in the bladder, which were well marked at the time of his admission into the hospital.—*Edinburgh Monthly Journal, Jan.* 3, 1852.

Dysentery, complicated with Gastritis. By C. W. Prather, M. D., of Venice, Butler County, Ohio.—Dysentery having prevailed in this region as an epidemic, less or more, during the summer-months of the years 1849, '50, and '51, I am induced to prepare a brief account of it for the Lancet.

The first two seasons, it presented itself in such a character, that I was induced to believe that its treatment was based upon false pathological views, from finding that a few small doses of epsom salts and opium would control the disease. But I had not then seen it in its complicated and malignant form, which was left for me to witness, during the summer months of 1851, and which was then of a most aggravated character.

In a few of the cases during this year, the nervous system yielded to the violence of the first shock, was unable to react under the continued violence of the disease, and death terminated the scene in a few days.

The impressions made upon the nervous system, are more vivid in infants than adults, which may at first only produce functional disorders, and if not relieved soon, will terminate in exhausted excitability, or fatal organic disease.

Not having an opportunity of making a post-mortem examination, I was forced to conclude, that the disease in the beginning, was congestion of the colon and rectum, which undoubtedly in a few days terminated in inflammation; but it appeared impossible to tell, at what precise time this took place. In some three or four of the fatal cases, I think inflammation never took place, but the patients died purely from the nervous shock, as early as thirty-six hours from the commencement of the attack.

The different ages, sex, parentage of, mortality, &c., may be seen by the annexed table.

	Number of cases.		Number of deaths.	
	MALES.	FEMALES.	MALES.	FEMALES.
Under 2 years of age	8	11	3	4
Between 2 and 10	19	15	1	5
" 10 " 20	11	9		
" 20 " 30	14	13	1	
" 30 " 40	3	5		1
" 40 " 50	3	5		1
Above 50		1		
	58	59–117	5	11–16

These statistics are taken from my case book, and comprehend the aggravated cases only; there being at least half that number of mild ones not considered in the above.

The different cases required various modifications of treatment, but in all, opium was the sheet anchor. Calomel, in a few cases proved beneficial, but in the great mass of them, it was more or less an irritant, especially if gastritis was a complication. In a number of cases it was carried to ptyalism, without having any controlling

effect upon the disease, which continued on for a number of days after.

Turpentine, in a few cases acted admirably, but in the most of them, it either produced vomiting, or dried up the tongue, and aggravated all of the symptoms.

Creasote certainly produced less benefit in those cases than any other medicine, except in chronic cases, the result of a few of the acute, and also in some after the dysentery had subsided, leaving a slight gastritis which would prevent the patient from convalescing speedily; in such cases it seemed to act with a most happy effect.

Nitrate of silver undoubtedly is perfectly useless. I could see no good effect from it whatever, having used it in different forms, and in every stage of the disease; the effect ascribed to it must undoubtedly be owing to the opium combined with it. Epsom salts in small doses (from 12 grains to a drachm, according to circumstances,) is certainly one of the best adjuvants, but it will not answer if gastritis be present, which is not uncommon in the very beginning, and very frequently makes its appearance during the different stages of the disease.

Astringents are generally of no use in the disease, but if the bowels remain relaxed, with some pain, and occasionally blood and mucus, the sub-nitrate of bismuth will control it frequently.

Opium in all stages of the disease is indispensable; a very good prescription is a combination of calc. magnesia 3 grs., acetate morphia ⅓ gr., ipecac. ¼ gr.; as the opiate allays the disease, the magnesia by accumulation becomes a very gentle aperient.

Fomentation and counter irritants, are very useful adjuvants in the treatment. In one case of six years of age, morphine and fomentations was all that was used; the disease yielded in eight days, and convaleseed speedily. When the disease ran a sufficient length of time for the bowels to become ulcerated, the disease always proved fatal; and in those cases a typhoid type of fever would attend, and the ordinary remedies used for it had no effect. It was not of a malarious character, as far as I could judge, or if it was, quinine had no controlling effect.

Western Lancet.

Dropsy of the Amnion. By W. H. Pitts, M. D., of Albemarle.—During the afternoon of 3d February, I received an urgent call to visit a negro girl of Mr. B. H. B., aged about 17, some 6 miles distant from my location. When I arrived, and before I entered the quarter in which the girl was, her mistress informed me that she was taken on the Friday morning previous, with what they supposed were labor pains; that they sent for a midwife in the neighborhood, who pronounced their conjectures correct; the girl however protested that it could not be so, for it was not her time as yet—that she didn't look until the middle of March. Her pains, weak and irregular, continued during that day and throughout Saturday, Sunday, Monday, and Tuesday, sometimes attributing her symptoms to colic, then to hysteria, until at length their attention was called to the very perceptible and gradually increasing enlargement of the abdomen, and the constantly increasing general distress consequent thereon—then it was that they at once determined to seek further aid.

When I entered the house, I was struck with the enormous enlargement of the abdomen; placing my hand upon it, it was found to be very tense and tender to pressure. An examination per vaginam was instituted, which revealed an os tincæ dilated to about the size of a quarter dollar, through which a tense bag of waters could be felt. Ballottement at once rendered the diagnosis clear without a chance of doubt. Her pulse frequent and feeble, being 120—respiration short and hurried—skin cool—general restlessness of system—determined me to proceed without delay to the relief of the patient. Upon inquiry, it was ascertained that the girl had passed no urine for some 18 hours, though she had recently made the attempt several times without avail. This induced me to make an effort to evacuate that viscus, but owing to the great pressure upon it by the distended uterus, it was found impossible to introduce the catheter farther than 2½ inches. I then proceeded to evacuate the uterus of its contents by rupturing the bag of waters with the point of my finger nail. It was now 5½ o'clock, P. M.; at 6 the bag, during a contraction, burst, and from what escaped into the vessel and on the floor, and afterwards during the process of the labor, I hesitate not to say, that at least 7 or 8 quarts of water escaped. The abdominal distension was at once

relieved—her breathing became natural—pulse fuller and at the rate of 112—labor pains active and regular—and at 11½, P. M., a living fœtus was expelled; it seemed to be of 7 months development, was very puny and attenuated—it lived three days. I examined the appendages very minutely, but perceived nothing abnormal about them.

The patient, after the labor, expressed herself as quite comfortable—the pulse at 3 A. M., had fallen to 88, full and soft—I saw her again on the next day at 4 P. M. She expressed herself as free from pain—had slept throughout the day—the pulse had now assumed its natural character—and from this time henceforward she convalesced rapidly.

The etiology and pathology of amniotic dropsy I leave to the learned in the profession, who can enlighten us.

North Garden, Feb. 20, 1852.

Stethoscope.

Medical Witnesses and Lawyers.—According to the morning Chronicle of Saturday last, whilst the Lord Chancellor was hearing a lunacy case, the previous day, he is reported to have uttered the following observation: "When a medical gentleman, with a large fee, was sent to visit a patient, his report invariably sustained, to a great extent, the view taken by the party employing him."

Disregarding altogether, the animus which apparently dictated such language in a court of justice, we must dissent, *in toto*, from its application to medical practitioners; and would respectfully assert, that the profession are quite as honest in giving their opinion as any barrister, consulted upon a point of law by a solicitor. Lord Truro, having once been an attorney, knows better than we could tell his lordship, that should a counsel decide against a client's right of action, that information is never communicated to the opposite party; nor are adverse witnesses ever called, whose evidence might invalidate the plea brought forward. The same proceeding is always followed respecting medical statements and evidence. If unfavorable to the persons employing the professional gentleman consulted, nothing is said thereon; so that the

court is never informed, unless in support of the case then advocated. Therefore, to suppose that medical men always decide in favor of the individual who pays them, is fully as erroneous as it would be for a Lord Chief Justice to observe, during the trial of a case before him, "It is very singular, when counsel with a large fee comes to plead in this court, his oration invariable sustains, to a great extent, the views taken by the party employing him!" How the common law bar would grin at such an effusion, may be easily conceived. Nor would the learned wigs be less astonished, were one of the legal fraternity to quote precedents against his own client, or argue in favor of the opposite one.

Another dictum recently expressed, also, deserves animadversion, when it was said that fifty guineas, given to Dr. Winslow, for visiting a patient in Yorkshire, seemed large. On the contrary, we think the amount was less than half what it ought to have been, considering the time employed, and the responsibility that physician thereby incurred.

Instead of criticising medical practitioners, we would advise all judges to condemn all barristers who take large fees from attorneys, to appear in court when particular cases are called, but can not be found at the critical moment. This would be a much better reform than grudging the honorarium of a medical man, for mental and bodily labor actually performed. With all deference towards the venerable judges of England, we sincerely believe it is injudicious and misplaced, for an occupant of the judicial bench to indulge in tirades which may disparage either his own or any of the other learned professions in public estimation.—*London Lancet, January*, 1852.

The climate of California, that *hotbed of Dysentrry and Diarrhœa*, is eminently calculated for the production of this disease. While in that country, I not unfrequently saw the thermometer stand, during a part of the day, as high as 109° Fahr.; and on one occasion, as high as 113° 58, and then, before the following morning, drop down below 60°. Hence, I must regard the prevalence of the disease there, with the unacclimated, as the relation of cause and effect. In fact, so common was diarrhea and

dysentery in that country, that a natural stool was rarely seen. With these facts presenting themselves, and in the absence of a better cause, we must regard the cool and variable autumn, succeeding a hot, dry summer, as the chief cause of the epidemic.—*N. O. Med. Jour.*

Mortality in the city of New Orleans.—A glance at the above table shows at once, that the *Zymotics* take the lead in the great work of death—amounting, in the aggregate, to 2,572. Next, in the magnitude of its numbers, is the class ranged under the diseases of the "*Nervous System*," being 1,278—a fraction above one half the deaths by the Zymotics. The third class in numbers, comes under the *Respiratory System*, reaching 1043. Hence, it appears that the Zymotic class outnumbers both the Nervous and Respiratory Systems.

The table also shows a very small mortality from diseases of the "Urinative System," (16) which can partly be explained on the ground of favorable climatic influences on our population. Again, can we not account for this remarkable exemption from serious diseases of the *urinative* organs, by reason of the vicarious activity of the cutaneous surface, superinduced by a warm, often humid, and for the most part, genial climate? That there exists a compensating sympathy between the skin and the urinative organs, is a well attested fact; and the "million" know that in warm weather, when the cutaneous surface eliminates a large amount of perspirable matter, the urinative organs are, in the same ratio, relieved in part of their accustomed burden. Hence, the simplicity and curability of affections of the urinative system in the latitude of New Orleans.

Of the 7275 deaths for the year 1851, in this city and Lafayette, 1871 perished in the Charity Hospital—more than three fourths of whom should be deducted from our resident population.

Although no deaths are embraced under the "Tegumentive" System—yet, perhaps, on a strict analysis of the causes of death, a few cases might be found under this head. We are persuaded, both from our own and the experience of other physicians of this city, that obstinate

and chronic diseases of the tegumentary system are of infrequent occurrence in our climate. We sometimes meet wtih an imported case—which may have resisted treatment elsewhere—but even the same remedies which had previously failed in other climes, will succeed when brought to bear upon the disease in our latitude. Let those thus afflicted avail themselves of this important hint, and remember that if, as the Latin Poet observes, a change of climate does not always affectt he mind—yet, in many instances, it will aid essentially in modifying the covering of the body.—*N. O. Med. Journa.*

Case of Punctured Wound of the Abdomen, involving the Intestines—Artificial Anus—Recovery.—About four years ago a young man, aged 25 years, in an affray was stabbed with a pocket-knife in the abdomen, on the left side, midway between the umbilicus and the anterior and superior spinous process of the ilium. The wound in the abdominal wall, as well as that of the intestine, was nearly an inch in breadth. As soon as he was stabbed, the intestine protruded, but it was immediately returned by a bystander. On his admission, the fæcal matter was voided freely by the external wound. Finding such to be the case, a warm poultice was merely applied; antiphlogistic regimen was enjoined; he was afterwards put under the constitutional influence of mercury, and kept quiet. The fæces gradually resumed the natural route; the external wound contracted, and by the end of a month it had closed entirely, when the man left the hospital, declaring, that save for his weakness, he never had felt better in his life. In this case, the adhesive inflammation had glued the intestine to the abdominal wall, so that the opening in the intestine continued to correspond with that in the wall. In a case where this did not occur, the attachment of the wounded gut to the wall, by means of suture, would be the only course to pursue; but in the example just cited, nature had obviated the necessity of any such proceeding. Perhaps, too, the natural position of the wounded gut had served to keep the two wounds in that apposition indispensably necessary for recovery.—*Ibid.*

New Orleans, February, 1852.

More than 150 *Gravel taken from the Bowels of a Dirt-Eating Child.* By Thomas Pollard, M. D., Richmond, Virginia.—July 14—Was called to see A. F., a child in his fifth year. Found him suffering with frequent tenesmus and pain in his bowels. Was informed by his parents that they had given him several doses of purgative medicine, which had brought from him *twenty-four gravel.* From subsequent inquiry it seemed he had swallowed these gravel through a morbid appetite, as he had several times been detected in eating dirt and pieces of pine bark. On introducing the finger into the rectum, I found it impacted with these little stones, the last operations of the medicine having failed to remove any of them. I proceeded to bring them away with the finger, and after getting all within the reach of my finger, counted fifty-four thus extracted. I could still touch more, and ordered a free dose of castor oil with eight drops of tinct. opium to allay the irritation and tenesmus, which was considerable, and which had been increased by the introduction of the finger and removal of the gravel. The swelling about the anus was considerable, and some blood was made to flow in the necessary manipulation used. There was also decided fever.

15—Rest was procured by the tinct. opium. The oil operated well towards the morning, and brought away 70 more of the gravel, the discharge of which was attended with much pain and some exhaustion. Directed sulph. morph. gr. $\frac{1}{8}$, and mucilages for drink.

16—Slept well after the administration of the morphine, and this morning is very comfortable. Discharged 4 more gravel. Altogether he has passed upwards of 150, some of which measured more than 1 inch in circumference, and few of which were smaller than the end of the little finger. The tenesmus and irritation gradually subsided, and convalescence was rapid. Directed that he should take sulph. iron as a tonic and subdue the morbid appetite which had given rise to the swallowing of these dainty bits. Was afterwards informed by his parents that the iron subserved the purpose intended, and that he never afterwards ate dirt, pine bark or gravel. I have generally found the sulph. iron to cure "dirt-eaters:" and I have been informed that on the large plantations of the south *copperas* is a very popular and successful remedy among the negro children who eat dirt.—*Stethoscope.*

New Views on Respiration.—Prof. Draper proposes, in the April number of the *American Journal of the Medical Sciences*, some modifications of the received theory of respiration. He contends, first, for the necessity of the constant action of the circular organic muscles; second, for the condensing action of the three tissues—the wall of the pulmonary vesicle, the pulmonary capillary, and of the blood-disk; and third, conjectures that there is an analogy between the relation to oxygen of hematine, and another nitrogenized coloring principle, indigo. His views are thus summed up:

The air introduced by atmospheric pressure, brought into play by the action of the diaphragm and other respiratory muscles, fills, in ordinary respiration, the nasal passages, trachea, and larger ramifications of the bronchial tubes. Between it and the gas coming from the pulmonary vesicles, diffusion steadily takes place, tending to remove the cell-gas into the atmosphere; but this gas is not brought from the vesicles by diffusion, which could not act with sufficient speed, but by the contraction of the circular organic muscles of the bronchial tubelets and of the cells, the different bronchial trees not acting simultaneously, but successively. As soon as the contraction is over, the tubes expand by their elasticity, and air is drawn into the cells. It is probable that, in producing these results, the vibratile cilia conspire, and the effect is aided by contemporaneous contraction of other bronchial trees, and the whole process ends with the expulsion of the foul air which has accumulated in the larger bronchi and trachea by the diminution which ensues in the general capacity of the chest during expiration. In respiration, the lungs are not, therefore, passive, as is commonly said.

The exchange between the gas in the cells and that in the blood does not occur through simple diffusion, or in quantities proportional to the diffusion volumes of the oxygen and carbonic acid. It is a complex diffusion, in which the disturbances arise from the gases in the blood being either dissolved or combined; and through three intervening membranes, that of the air-cells, of the pulmonary capillary, and of the blood-disk, all of which exert a condensing action, of the result of which it is impossible to furnish any numerical estimate.

Brought into presence of the hæmatin, the oxygen may possibly associate itself therewith, in a manner analogous to that which we witness, under similar circumstances, with deoxidized indigo.

External Use of Chloroform.—Dr. Channing read the following paper on this subject before the Boston Society for Medical Improvement: I have made some trials of the external application of chloroform. It has often been entirely successful in the present relief of pain. In some, the relief has been permanent. This use of the remedy of pain is not new. It has been said that a free application of chloroform to a part on which a surgical operation is to be done, will render such part insensible to the violence done it. Thus immersing a finger in chloroform will prevent the suffering which accompanies the deep cuts which some of the diseases of this member require, and which are described as exquisitely acute. These statements rest on good authority. In such use of chloroform consciousness remains unimpaired, the brain not being at all affected by it.

Having frequently applied chloroform externally for the relief of pain, in many and various cases, and often with speedy, and generally with continued relief, I propose to present some of them to the Society:—

Case I. 1848. Mrs. ——, about 30, has children. For some years has had symptoms of uterine disturbance. Among these, have been suffering on intercourse, leucorrhea, tumoral pains in and about the pelvis, always increased by walking, and which, except pain in the spine, are relieved by lying down. For the uterine conditions the usual means were faithfully employed, and her complaints there were entirely and permanently removed. The dorsal trouble, however, was as great as ever.

For this I recommended the external application of chloroform over the whole course of the spinewhich was involved in the disease. The effect was immediate and complete. I saw this patient a few days since, November, 1851, and found her well in regard to the back, and speaking of herself as very well in all respects.

In this case, the pain in the spine was doubtless the result of the reflex function, the womb being the original

seat of the maladay. But when the uterine affection was relieved, the sympathetic dorsal difficulty remained, and only yielded to the use of chloroform. The quantity used was an ounce.

Case II. Mr. ——, aged 22. A very feeble man in appearance; very thin in flesh; pale; and an almost constant sufferer from headache. This pain occupied but a small part of the head arc, and most frequently the right temporal region, It was accompanied by constant nausea, frequent vomiting, great prostration of strength, and demanding for its present relief firm pressure over the part affected.

The last attack, which happened a few weeks since, I applied chloroform to the seat of pain. A few drops were applied by means of a handkerchief. The immediate effect was redness of the skin and a tinging sensation in the spot. The pain was at once relieved. He raised his head from a friend's shoulder, opened his eyes, looked round, and expressed his utter surprise and deep pleasure at the entire relief which had followed the use of such apparently simple means. He called on me the next morning, and reported himself perfectly well. I have not been called to him since.

The relief in this was *sudden* in its occurrence, as it had been in others. It has not been less permanent on that account, or in such cases. It has acted at once to remove pain, and with a rapidity which distinguishes the relief entirely from that which follows etherization by inhalation. The brain does not seem to have anything to do with the matter. Local pain is abolished, and at once; and the nerves have no story of suffering to tell to the brain. The sentinel is at his post, but his function is not needed. The part does not lose its natural sensibility at all. On the contrary, it feels the tingling, the irritation of the chloroform, just as distinctly as at first. Nothing has been lost of natural power and healthful function. All that has happened is this; the pain has ceased, and the patient is well.

Case III. 1851. Mrs. ——, aged 36. Has long suffered from uterine disturbance. The most exhausting and annoying symptom was leucorrhea. This was a perpetual drain, and made her exceedingly uncomfortable. I was occasionally consulted in this case; but, as her gen-

eral health continued tolerably firm, no systematic attempt at recovery was thought necessary by the patient. She became pregnant, and supposed herself between two and three moths advanced in that state, when hemorrhage and severe uterine pain occurred, on account of which I was desired to see her. She had lost a great deal of blood before I saw her. I found her perfectly blanched—lips and whole face; skin cold; hands bloodless; faint; almost pulseless. Various means were used, and the hemorrhage was stopped. I considered her case, however, so pressing, that I passed the whole day in the house. She now began to complain of pain in the back. This had exacerbations in the night, becoming too severe to allow sleep, and continuing three or four hours without mitigation. For this I recommended chloroform, which was applied by means of a handkerchief, and with excellent results. After three applications, on as many days or nights, the pain ceased, and has not now, at the end of some weeks, returned.

Case IV. Mrs. ——, about 40. Last child, thirteen years old. I was called in consultation in this case, because of vomiting, attending pregnancy, of about three months' standing. The vomiting ceased under treatment, and food was taken in sufficient quantities, and was well borne by the stomach. A comatose state supervened, which increased, with entire abolition of mind, and death was its consequence. The termination of cases of fatal vomiting by coma has occurred in many instances which have come under my notice or knowledge. I do not, however, recollect a case in which apparent recovery has been followed by coma ending in death.

This case is reported here, because of the use of chloroform for one of its symptoms. This was pain in the back, in the course of the spine. It was very severe, taking the lead, in distress, of all the rest. For this pain I prescribed an ointment, if so liquid a substance as was produced by the union of lard and chloroform deserves the name. It was applied twice or thrice a day, and with most excellent effects, the pain entirely disappearing. It was used in the same way in the first of these cases.

Case V. Mrs. ——. Has had four premature labors; the first at about five months, the fourth at about the eighth. They were all still-born, or neither of them lived

over an hour or two. The fifth pregnancy was terminated at the full time by the birth of a living, healthful male child, on the 17th October, 1851. I visited her for the usual time after delivery, and left her in rapid progress towards perfect recovery. I was called to see her on the 27th October, and found her apparently very ill. Pulse rapid; skin hot; face flushed; much pain in head and both breasts, making all attempts at nursing absolutely agonizing. A thick eruption had appeared over the whole chest. Upon examination, the breasts were found exquisitely sensitive, not bearing pressure at all. Sufficient pressure, however, was made to enable me to ascertain that there was no unusual hardness, or, in short, any other sign of disease in either organ. The pain was confined to the skin, and seemed to involve its whole tissue. The eruption proved to be a very full crop of sudamina of unusual size, resembling exactly an exaggerated form of the same kind of eruption in typhoid fever. Various means had been used before my visit, but without any good effect.

I recommended chloroform, and with the best effects. I regret I had not used it in combination with lard or rose ointment, both of which I have used, and for the reason that it may in this way be more extensively applied, with more continuous benefit, and with less of the unpleasant tingling which so generally accompanies the uncombined substance.

On what did this aching pain depend? It resembled that which at times makes *shingles* so very distressing. Was it owing to the eruption? I have never known the skin in sudamina to be complained of as the seat of pain, and I have examined it when covered by this eruption after a manner to have produced pain had morbid sensibility existed. In Mrs. ——'s case, the pain was persistent, being much aggravated by handling, though never so gently. The pain in this case subsided, under the use of chloroform, long before the eruption disappeared.

Case VI. Mrs. ——, aged 25, married very young, and had a premature labor within a year or two afterwards. I was desired to see her, October, 1851, on account of an enlargement of the abdomen, on the left side, and for various signs of ill health. The tumor was found to be an excessively enlarged spleen. It filled the left hypochon-

drium, extending forward to the epigastrium, and downward to Poupart's ligament. Its anterior boundary was the linea alba. From this point or line it extended laterally and backward, filling accurately one whole side of the abdomen. She has been always regular in regard to the catamenial function, with the exception of the last two periods. Nausea, vomiting, and other unusual and disagreeable feelings have led to a suspicion that pregnancy may exist. She has recently taken a fatiguing journey of three days, and has suffered much since. The pain has been most troublesome in the head, and in the seat of the tumor. Diarrhea and flatulence, with general anasarca, involving the face and head, are also present. Chloroform to the forehead and to the seat of the tumor has given her much comfort, more than has been derived from any other means used.—*American Jour. Med. Sci.*

Prof. Christison's Lecture on the present state of Medical Evidence.—The first objection to be stated against it (the practice of not allowing medical witnesses to be present in court to hear the evidence of the general witnesses) is, that it tends to suppress and conceal medical facts. It is impossible for judge or counsel to know always what facts in the general evidence are medical, and what not. No one will doubt the aptitude with which the lawyer acquires for the occasion a knowledge of the particular art or science concerned in a law case. But it is not to be supposed that any aptitude or any practice of the kind will enable him to single out from the testimony of the general witnesses the whole facts which bear upon medical opinion. It has been already mentioned, that one of the shrewdest lawyers who ever occupied the Scottish bench once made this admission in court. I may now mention a remarkable illustration of its justice. In 1831, on the trial relative to the disputed insurances on the life of the late Earl of Mar, which it was maintained had been viti ated by concealment of the vice of opium-eating, the presiding judge, the late Lord Chief Commissioner Adam, told the jury in his charge, as a fact in the case, that although there was evidence of the Earl having purchased laudanum at the rate of nearly three ounces a-day for

some years, there was no evidence of his having actually taken it to that excess. There was indeed no direct evidence of his having done so. But the judge, not being a medical man, had not perceived the medical bearing of a most pregnant little fact which was sworn to by the Earl's housekeeper; who said she gave him every morning before he got up so large a dose as a tablespoonful of laudanum at once. As he was also proved to have taken habitually several other doses during the day, the whole quantity was approximately accounted for. But—which is still more pointed—the enormous dose, and the time of day when he took it, were to every medical man irrefragable proof that Lord Mar must have long been a practised and slavish opium-eater.—[Med. and Surg. Journal, xxxvii., 130.]

Another objection is, that facts are liable to be misstated and misrepresented, owing to errors of language. One of the chief reasons for the preference we give to the direct testimony of our own senses over the testimony of others, is the risk of error from the necessity of the intervening use of language. The medical witness is subjected by the present rule of Scotch courts to a two-fold risk of this kind, inasmuch as he receives the facts, not directly from him who witnessed and describes them, but through the intervention of a third party. And the risk of error is all the greater, that many words have a double meaning, one general, and the other scientific or professional. Some years ago, on an important trial in the High Court of Justiciary for assault, the public prosecutor attempted to prove, that the person assailed had been wounded to the effusion of his blood; which is held in law to be an aggravation of guilt in such cases. When the principal medical witness was examined as to the injuries inflicted, he was asked whether any blood had been effused; and he replied that a good deal must have been effused. But he meant that there was effusion of blood under the skin, constituting the contusion he had described; while the counsel and court at first received his answer as implying that there had been considerable loss of blood from a wound. The latter view was on the point of passing to the jury as a fact, when one of the judges detected the equivoque, and set the matter to rights. But the incident is not the less illustrative of the risk of serious

error, in circumstances in which scarcaly any medical man could have gone wrong, had he been duly pre-informed as to the bearings of his evidence.

A third objection is, that the medical witness has no opportunity of judging of the truth of the facts, on which he is asked to found his opinion. The same professional skill, which enables him to collect the facts better than another, makes him also a better judge of their authenticity. I am aware of the theory in law, which holds that the jury alone are to judge of the truth of the facts. I apprehend, however, this doctrine may be meant to apply only to those facts whose truth depends on the veracity of the witness. But at any rate, both in regard to such facts, and all others indiscriminately, the rule is violated by the present practice of Scotch courts in examining medical witnesses. The facts do not pass to them with the stamp of authentication from the jury. For the questions put to the witnesses are framed from the facts, and put generally by the counsel, and occasionally by the judge, but very seldom by the jury. In truth, the rule must be inevitably violated, whenever evidence consists of opinion from facts deposed to by others; because no man in such circumstances can either form an opinion as a witness, or shape questions to elicit an opinion from a witness, without exercising his judgment as to the authenticity of the facts. I do not here refer so much to facts whose authenticity depends on the veracity of the witness who deposes to them. His evidence as to facts, whence medical opinions are to be deduced, may be morally true, and nevertheless scientifically false. And it is mainly their authenticity in the latter respect, which is referred to at present, as a matter which must be determined before an opinion can be safely formed from them. According to the existing practice of Scotch courts, this is done by the counsel and the judge. Is it not more rational that it should be done by the witness himself, who alone is qualified by professional education to exercise such judgment?

No one can hesitate how to answer that question, who is acquainted with the nature of medical facts—the acuteness required for observing them—the experience for appreciating them—the judgment for distinguishing fact from opinion. I would beg in particular to remark, that few are aware, and no unprofessional person can be adequately

so, of the great risk that opinion shall be mistaken for fact.

Facts being mostly cognizable by the external senses, they are received in evidence much more unreservedly than opinions; which, besides the exercise of observation, involve that of many other faculties of the mind, all much more liable to error. Hence opinions, if taken for facts, will be apt to be admitted as such with undue facility, because not duly tested by the judgment. Spurious facts of this sort abound in pure medicine. How much more then in medical jurisprudence, if supplied by unprofessional persons! Suppose that in a trial on account of a disputed assurance, an ordinary witness deposes that the party insured had at a certain date palsy in the limbs. To a non-medical eye nothing could be liker a simple fact. But it is no such thing. The affection may have been lameness, left by an old rheumatism. It may depend on stiffness of one or more joints from local disease or injuries; it may be part only of a general debility, affecting, as it often does, the limbs more than the rest of the body; it may be a mere awkwardness of gait. In calling the affection palsy, then, the witness does not state a fact, he forms a diagnosis, he delivers an opinion, and an opinion very likely to be wrong; for it is sometimes no easy matter, even for a medical man, to make up his mind as to the existence of paraplegia in its early stage. How often upon trials does it happen, that in describing the appearances in suspected poisoning, the witness says he saw inflammation of the stomach! and this is received as a statement of fact. But is it really such? Several characters are necessary to constitute inflammation: some of these may be imitated by the state of the stomach at certain stages of digestion; others by pseudo-morbid appearaces arising spontaneously a short time before or after death; others by the action of extraneous agents subsequently. The witness, therefore, does not describe a simple fact: he forms a pathological opinion. And were any further proof necessary to establish this, I have but to remind you how often he is discovered to be wrong. Some years ago a man in London was tried for murdering his mistress, and throwing the body into the Thames. His defence was that they determined to drown themselves together; but that his resolution gave way in the water; and that,

while he with difficulty saved himself, he failed in his efforts to save also his companion. But three surgeons, in this matter no wiser than three ordinary observers, swore at the coroner's inquest, that they found contusions on the head and face of the girl's dead body. This passed for a fact, and to most unprofessional persons would seem a very simple fact. The man was accoadingly tried for his life. But on the trial a fourth surgeon swore, that he afterwards dissected the alleged bruises, found no traces of congested or extravasated blood, and that in his opinion the appearances were no more than the livid marks which are apt to arise in many bodies after death. A somewhat similar case occurred in this city some years before, in which the prisoner justly escaped through the evidence of the late Mr. John Bell and Mr. Fyfe.

If I may trust my own experience of proceedings in criminal and civil trials, the confounding of medical opinion with medical fact is a matter of very frequent occurrence, and one serious cause of the imperfections of medical evidence. Nor is it rashness of criticism to express a fear, that errors originating in this cause must be very apt to happen under the present system, which requires medical witnesses to form their opinion on the facts, without a previous opportunity of sifting them.

A fourth objection is, that the medical witness can have no correct idea of the bearings of his evidence on the case. This is too evident to need illustration. The proposition indeed may with reason be stated more strongly. For he will be very apt to take up an incorrect idea of the bearing of his evidence; inasmuch as questions framed upon general propositions, or supposed conditions, can not fail to give him some insight, and yet a very imperfect and probably incorrect one, into the ordinary facts and nature of the case.

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AMERICAN MEDICAL ASSOCIATION.

Richmond, May 7th, 1852.

Gentlemen—According to promise, I proceed to give you some account of the last meeting of the American Medical Association.

The Association met in this city, pursuant to adjournment, on Tuesday morning the 4th of May. Dr. Haxall, the Chairman of the Committee of Arrangements, read the names of the delegates present, as far as enrolled, and the several State delegations proceeded to select each a committeeman on nominations. Our friend Dr. Sutton, a delegate from the Medical Society of Kentucky, was appointed unanimously by the Kentucky delegation, and Dr. Eve, the only representative from Tennessee, acted as committeeman from that State.

The committee retired, and, during its absence, Dr. Moultrie delivered the annual address. It was a subject of general regret that he spoke in so low a tone of voice as to be entirely inaudible save to those who were very near to him.

After the address, the committee reported the following names for officers during the ensuing year:—President, Dr. J. B. Welford, of

Fredericksburg, Va.; Vice-Presidents, Drs. Jonathan Knight, of Connecticut, Jas. W. Thompson, of Delaware, T. Y. Simmons, of S. C., C. A. Pope, of Mo., and D. Francis Condie, of Pennsylvania, who were all unanimously elected. Dr. Wellford was conducted to the chair by a committee, and returned thanks in a few remarks which were very happy.

Dr. Sequard, of Paris, a young gentleman of some celebrity as an experimental physiologist, one of whose productions you have seen in the last number of the Philadelphia Medical Examiner, and Drs. Semmes and Berry, of the District of Columbia, were elected members by invitation; after which the Association adjourned till 4½ o'clock.

The first report read during the afternoon was from the Committee on Prize Essays, of which Dr. Hayward of Boston, was chairman. Dr. H. stated that fourteen essays had been offered, two of which were not examined by the committee, one having been received at too late a day, and the name of the author of the other having been made known to the committee. The distinguished gentleman further remarked, that after a very careful and patient examination of the several essays, the committee had awarded but a single prize, and that the first, no essay being deemed altogether worthy of the second. He thought it necessary to state, however, that among the essays offered, there were several besides that on which the prize had been conferred, worthy of honorable mention, though it was due the committee to say that, except this one, none, in their opinion, had "contributed to the increase of our knowledge or the enlargement of the boundaries of science."

The package containing the inscription corresponding to that borne by the prize essay was opened in presence of the Association, and found to be signed by Dr. Austin Flint, of Buffalo. The title of the essay was *The Variations of Pitch in Percussion and Respiration Sounds as a Means of Physical Diagnosis.* The announcement was received with much applause.

The committee reported in favor of St. Louis as the next place of meeting and a change of one of the secretaries to suit the locality. After which the Association adjourned.

Wednesday morning, as soon as the the Minutes had been read and approved, the secretary informed the Association that he enclosed copies of the preamble and resolutions adopted by the Association at their session of 1850–'51, relative to assimilated rank of the Medical Staff of the Army and Navy to the several departments, as directed by the reso-

lutions, and from Dr. Harris, chief of the Bureau of Medicine and Surgery, he had received a letter approving of the course of the Association, which he proceeded to read.

Dr. Pinckney, of the Navy, asked leave to read a memorial which he had prepared to present to Congress on the subject of assimilated rank. Leave was granted, and the gentleman read a very excellent memorial, and followed it by an explanatory speech, which, save in its length, was not unacceptable to the Association.

Dr. Cox, of New York, offered resolutions approving the memorial of Dr. Pinckney by the Association, urging on Congress a calm and dispassionate consideration of them and speedy legislation concerning them. He felt confident the memorial would be granted; indeed he did not see how it could be longer refused. It was a matter of great interest to the profession, not only to those in the army and navy but to civilians also. He believed indeed that Congress would not allow the present session to close without defining clearly and definitely the relative rank of the Medical Staff of the Navy, and he wished the Secretary of this Association to be instructed to address a copy of the resolutions and Dr. Pinckney's memorial to the Secretary of the Navy, and President of the Senate and House of Representatives.

Dr. D. W. Yandell, of Ky., moved a reference of the resolutions to a committee of three, to be appointed by the president—which was carried.

Dr. Atkinson, of Va., offered the following:

Resolved, That we have listened with pleasure to Dr. Pinckney's able and eloquent remarks in vindication of the honor and interest of the profession, and that we will second his efforts to obtain justice from Congress by every means in our power. The resolution was adopted and referred to the same committee.

Dr. Simons, of Charleston, S. C., offered a preamble setting forth the state of emigrant ships as regards disease, and especially those arriving at the ports on the southern shores of the United States from California, and their not being provided with medical attendants. Dr. S. regarded this as deserving our attention as conservators of health, and thought it our duty to lay these facts before Congress. He therefore proposed that Congress be desired to require all vessels bringing steerage passengers to the United States to be provided with a surgeon, and that a committee be appinted to carry out the resolution and make suggestions in regard to the importance of the measure.

Dr. Wood, of Philadelphia, made a motion that the preamble and resolutions be laid on the table for the present; which was carried.

Dr. J. B. Flint, of Ky., proposed to alter the Constitution by substituting for the annual volume of Transactions now published, a quarterly journal which should contain the proceedings, be conducted under the auspices and considered the exponent of the views of the Association, on medical science, education and ethics.

Dr. Storer, of Boston, the Chairman of the Committee on Obstetrics which made its report at Charleston, wished to claim the indulgence of the Association for a few moments. He had found himself the subject of an anonymous and scurrilous attack in the April No. for 1852, of Nelson's Medical Journal. He desired it to be distinctly understood that he rose not as a private individual whose character had been aspersed, but as the representative of one of the committees of the American Medical Association—as a representative of the Association itself. He did not consider the attack a personal, but a national offence, and he did not wish it viewed in any other light. He was charged in that Journal (here he read the article), with having misrepresented the state of the science on which he was called upon to report. He had not done so knowingly or willingly—he had not done so at all. In compiling his report he had examined all the records, had access to the medical journals, had written many letters, had made many inquiries, and he believed that the report was fully up to the state of obstetrical medicine in America. He hoped gentlemen would understand him. He spoke not as Dr. Storer but as chairman of the committee, and he branded the charges made in Dr. Nelson's Journal by some anonymous, but he believed not unknown writer, as unjust, ungentlemanly, ungenerous, and untrue. He begged the pardon of the Association for having consumed so much of its time, and resumed his seat amid great applause.

Dr. Hays, of Philadelphia, arose and said that he too had been mentioned in scurrilous terms in the article just read by his distinguished friend from Boston. He confessed to feeling complimented that his name had been found in such good company—as much complimented by the mention made of so humble an individual as himself as he supposed the writer would be at having been mentioned in the American Medical Association.

The report of the Committee on the Constitution was called for, and Dr. Hays, the chairman, proceeded to read it. Dr. Yardley, a member of the committee made a counter report.

Dr. Atlee, of Lancaster, Pa., spoke in favor of Dr. Hays' report. Had great confidence in the judgment of the distinguished gentleman from Philadelphia—knew no man in the Association better qualified to suggest changes in the constitution than Dr. H.

Moved by Dr. Lopez, of Mobile, that both reports be received, which was carried, but not until after a good deal of discussion between Drs. Atlee, Wood. Cox, Marsh, Stewart, Lopez and Knight.

Dr. Thomas, of Md., moved that the reports be referred to a committee, with instructions to report on the changes proposed.

Dr. Hays objected. He did not believe that Dr. Thomas' plan would answer—thought it better that every one who had a plan should present it—let the whole matter come up at once and then discuss the proposed alterations *seriatim*. For his own part he did not expect to do all in a day—it would require years to get a perfect constitution, perhaps we never would,—he was satisfied that we should never be able to frame a constitution which suited everybody. All that we could hope for was a constitution which worked well in its main features—the details would gradually correct themselves.

Dr. Stewart, of New York, offered an amendment to Dr. Thomas' resolution, to the effect that the committee be instructed to report tomorrow on the reports of the Committee on the Constitution, which was carried.

Dr. Watson, of New York, offered a resolution referring the report of the nominating committee back to said committee, with instructions to report complete on the standing committees and other committees, as may be requisite for providing business for the Association at its next annual meeting.

An invitation from the New York delegation to the Association to hold its next annual meeting in that city, signed by a larg number of persons, was read, and Dr. Watson offered a resolution that it be accepted.

Dr. Pope, of St. Louis, objected to this—hoped the Association would stand by the recommendation of the committee.

Dr. Horace Green, of New York, thought the honor due New York —had never held a meeting there—both physicians and people were desirous that the Association should convene there.

Dr. Hooker, of New Haven, said he would be very glad to accept the hand tendered us from St. Louis, but thought it impracticable; he

believed it would be strictly a western meeting; and then the Association had recently met in the West.

Dr. Pope replied that, out of the seven meetings held by the Association, six had been on tide water. He was aware that old gentlemen from the East were afraid to travel in the West, because of the danger of steamboat explosions. Western men, however, considered this a puerile objection and altogether futile!

Dr. Drake here followed in a very amusing speech in favor of St. Louis. The question was called, and carried in favor of New York by a majority of eleven votes—the vote standing ninety-one for New York, eighty against it.

Dr. Haxall, of Richmond, offered the following resolution which was adopted:

Resolved, That after to-day the Association will hold a morning session from 9 o clock, A. M., to 3½ P. M., and no afternoon session.

Dr. Drake offered a resolution to be referred to the select committee on the constitution, that students be required to stay to the end of their first course of lectures.

Dr. Hayward, of Boston, read a letter from Dr. Horatio Adams, of Waltham, Mass., regretting that he had been compelled to forego the pleasure of attending the Association, owing to a serious accident, and presenting the report of the committee on the Action of Water on Lead pipes, and the diseases resulting from it—asking the reference of the report to the committee on Publication. The report was received and referred.

A letter was read from the New York Academy of Medicine, protesting against the college *cliniques* as conducted in that city. The Academy alleges that the *material* of the cliniques is frequently drawn from among the patients of the young physicians who are thereby deprived of interesting cases and important surgical operations, and also not unfrequently of fees. Referred to the Committee on Publication.

Dr Corbin, of Va., read the following resolution which he desired to lie on the table for the present:

Resolved, That one member from each state represented in this Association, be appointed a delegate to represent it in the Medical Association of Europe, and this committee be requested to visit the hospitals, and report to the next meeting the various improvements in the several branches of science connected with Medical Education, and in the treatment of diseases in foreign countries.

The Association then took a recess till 4½ P. M.

SECOND DAY, *Wednesday, May* 5th, 1852.

Afternoon Session.—The President, Dr. Wellford, in the chair.

Dr. Drake submitted the following:

Resolved, That all papers and reports on scientific subjects shall be read to the Association before the question of their publication shall be decided.

Dr. Wood, of Philadelphia, opposed the resolution. The Association had appointed a committee on publication, and he thought the publication of all communications should be left to them.

Dr. Phelps offered an amendment, which, with the resolution, was laid on the table.

Dr. Condie, of Philadelphia, presented a paper on Chemistry, from a gentleman, not a member of the Association; and Dr. Drake presented a paper by Dr. Wright, of Ohio, on "the influence of the occupation of Daguerreotypists upon their health." Dr. Condie moved that both papers be referred to a select committee. The President appointed Drs. Rogers, Merritt and Dunbar, with instructions to report to morrow.

Dr. Eve, from the committee on nominations, recommended the following officers for the ensuing year:

For Secretaries:—Drs. P. C. Gooch, of Va., Edward L. Beadle, of New York.

For Committee on Publication:—Drs. Isaac Hays, of Philadelphia, P. C. Gooch, of Va., E. L. Beadle, of New York, Isaac Parrish, of Pa., E. Emmerson, of Pa., D. F. Condie, of Pa., G. W. Norris, of Pa.

Committee of Arrangements:—Drs. Campbell Stewart, of N. York, John Watson of New York, Wm. Rockwell, of New York, James R. Wood, of New York, Robert Watts, jr., of New York, Alfred C. Post, of New York, Jno. G. Adams, of New York, H. D. Buckley, of New York.

The report was received and the gentlemen named were unanimously elected officers of the Association for the ensuing year.

Dr. Dickson, of S. C., not being able to attend the meeting of the Association, entrusted the report of the committee on the "Blending and conversion of the types of Fever," to Dr. A. B. Williams, who proceeded to read it. The report was ordered to be printed and referred to the committee on publication.

Dr. Hayward, of Boston, presented and read the report of the committee on the "Permanent and radical cure of Reducible Hernia," which was ordered to be printed and referred to the committee on publication.

I neglected to report that Tuesday afternoon and Wednesday morning, the reports of the committees were called for.

Dr. Lopez, chairman of the committee on "the Epidemic prevalence of Tetanus," stated that he regretted extremely that he was without a report. He had been unsuccessful in every attempt to gather materials for a report. He had addressed one hundred and fifty circulars to the profession in Alabama, and had received only four replies, and none of them contained anything which he could use. He thought, however, that if granted another year, he would be able to make a suitable report concerning this very interesting subject, and he was accordingly continued as chairman of the committee.

Dr. Wood, of Philadelphia, answered the call for the committee on "Diseases of a Parasitic origin," by saying that he had expected the Association to be so crowded with reports that he had neglected to prepare one, but if it was the wish of the Association to continue him on the committee, he would set to work and furnish one for the next meeting. Continued.

The committees on Epidemics were called for. Dr. Hooker, of New Haven, presented his. Dr. Rayburn, of St. Louis, had addressed a letter to the Association asking for further time, which was granted.

The committees for Virginia and North Carolina had distributed four hundred circulars and had received but two answers. Desiring to be continued, leave was granted.

The committees for Kentucky and Tennessee presented their report.

On Tuesday Dr. Drake introduced a resolution to the effect, that the reports of the standing committees should be submitted to other committees to be appointed by the President, and that they should report as to whether the reports of the standing committees should be published. He followed in a long speech in which he exhibited no little feeling, and in turn, was followed by Drs. Hayward, Hooker, and Lopez, who attacked the resolution with warmth and spirit, the latter gentleman with some bitterness. The resolution was lost by an overwhelming majority.

The debates on Thursday I did not attend. Friday morning the Association made an excursion on the Danville railroad, at the polite invitation of the President of the company. Friday afternoon they held a short session and adjourned to meet at a supper given by the Medical Society of Virginia, at the Exchange Hotel.

D. W. Y.

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